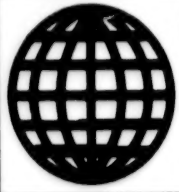


JPRS-TEN-94-019

5 August 1994



**FOREIGN
BROADCAST
INFORMATION
SERVICE**

JPRS Report

Environmental Issues

This report contains information which is or may be copyrighted in a number of countries. Therefore, copying and/or further dissemination of the report is expressly prohibited without obtaining the permission of the copyright owner(s).

Environmental Issues

JPRS-TEN-94-019

CONTENTS

5 August 1994

AFRICA

REGIONAL AFFAIRS

Africa Environmental Reports	1
------------------------------------	---

CHINA

Zhejiang Adopts Ecological Measures in Farming, Breeding	2
Zhejiang Makes Progress in Environmental Protection	2
Beijing Increases Development of Oceanic Resources	3
Ecological Agriculture Practiced on Loess Plateau	3
Clampdown on Polluters Focuses on Township Enterprises	3
Official Welcomes International Assistance for 'Agenda 21'	4
Ministry Says Chinese Nuclear Test 'Ideally Clean'	5
Beijing, UNDP Hold Meeting on 'Agenda 21'	5
Zou Jiahua Calls For 'Sustainable Development'	6
Government Issues Rules to Protect Wildlife	6
State Council Approval Sought for Dongting Lake Project	7
Regulations Issued on Punishments For Killing Rare Animals	7
State To Conduct Six-Year Environmental Cleanup	8
Nation's Efforts To Protect Marine Environment Succeeding	8
More Aid Urged for Developing Nations' Environment Problems	9
Jiang Zemin Meets Deputies to 'Agenda 21' Meeting	9
Minister: Beijing To Investigate Random Afforestation	10

EAST ASIA

AUSTRALIA

Canberra May Refuse To Cut Greenhouse Gas Levels	11
Editorial Assesses Environment Minister, Green Policy	11
Government Said Breaking Hazardous Waste Agreement	12

CAMBODIA

Columnist Finds Fault With New Timber Export Policies	12
---	----

INDONESIA

Editorial Views Pros, Cons of New Sea Law	13
---	----

JAPAN

Agency Monitors Say ODA Lacks Concern for Environment	14
Tokyo To Spend 2 Billion Yen for Biodiversity Protection	14
Government Decides To Ban Trade in Hawksbill Turtles	15
Agency Panel To Study Introduction of Environment Tax	15
Environment Agency To Monitor Industrial Chemicals Flow	15
Zushi Mayor To Resign Over U.S. Military Housing	15
Tokyo Sources Say Norway Wants Minke Whale Trade Ban Lifted	16

MALAYSIA

Tankers, Fishing Boats Blamed for Hydrocarbon Pollution	16
Kuala Lumpur To Assist Burma in Environment Protection	16

VIETNAM

Some Facts on Environment in Hong Gai-Cam Pha	17
---	----

EAST EUROPE

ALBANIA

German Firm To Take Back 94 Tons of Pesticide Within July	19
---	----

BULGARIA

Air Pollutants Exceed 'Acceptable Levels' in Sillistra	19
--	----

HUNGARY

Authorities Begin Search for Nuclear Waste Storage Site	19
Environmental Damage Makes Life Expectancy Lowest in Europe	20

ROMANIA

Penalties for Violation of Environmental Norms	20
--	----

SLOVAKIA

'Embarrassed' WWF Halts Campaign Against Gabčíkovo	23
Minister Outlines Left Coalition's Ecological Objectives	23
Nuclear Plant Conversion to Gas-Fired Plant 'Unreal'	24

YUGOSLAVIA

Minister Says Yugoslavia Will Not Become Nuclear Waste Dump	24
---	----

LATIN AMERICA

REGIONAL AFFAIRS

Southern Cone Environmental Issues	25
--	----

COLOMBIA

Company To Ship Toxic Waste Back to Croatia	25
---	----

GUYANA

Commissioner Discusses Environmental Effects of Mining	26
--	----

NEAR EAST/SOUTH ASIA

BANGLADESH

Commentary Favors Speedy Resolution of Ganges Water Problem	27
---	----

INDIA

Kerala Coastal Waters Country's Most Polluted	27
---	----

Rao's Steps To Improve Environment Reviewed	28
Environment Impact Notification Provisions Modified	29
Yamuna Plan Approved, Body Set Up To Tackle Pollution	30
Minister on Possible Renewable Energy Agreement With U.S.	31
Nonconventional Energy Sector Advances to Operational Stage	31

PAKISTAN

'Lack of Coordination' Seen Hampering Environmental Laws	32
--	----

CENTRAL EURASIA

REGIONAL AFFAIRS

Environmental Protection Accord Signed With Belarus	34
Agreement Signed With Belarus on Environmental Issues	34

RUSSIA

Moscow Mayor Reports on Ecological Situation	34
Nuclear Fuel Recycling Plant Construction Delay Scored	35
Work Continues on Sealing Nuclear Sub Komsomolets' Bow	36
Radioactive Waste Processing Ship's Equipment to be Updated	36
'Komsomolets' To Be Training Site for Radiation Safety	36
Pacific Fleet's Radioactive Dump 'Poses No Danger'	37
Unions Discuss Aid to Regions Hit by Radiation Accidents	37
'Greens' Remain on Political Sidelines	37
Director Details Work of Volga Ecology Institute	38
Missile, Space Research Firms Seek To Form Environmental Consortium	40
World Bank Approves \$65 Million Environmental Loan	41
Obstacles Hinder Environmental Security Program	42
Hydrochloric Acid Found in Drinking Water Near Khabarovsk	43
Safety of Moscow Nuclear Sites Assessed	43
Komsomolets Torpedo Launchers Prepared for Sealing	44
Further on Environmental Program for Lake Baykal	45
Analysts: Totsk Exercises Will Not Cause Ecological Damage	45
Government Approves Protection Program for Lake Baykal	45
Duma Holds Parliamentary Hearings on 'Closed Cities'	45
Ecology Panel Discusses Pollution in Space, on Earth	46
Committee Report Sounds Pollution Warning	46
Norway To Take Russians Fleeing Possible Kola Disaster	48
Report Views Environmental Issues, Problems	48

KYRGYZSTAN

Anti-Nuclear Leader Seeks Regional Health Monitoring Unit	48
---	----

UKRAINE

Minister Scores Handling of Nuclear Issues	49
Radioactive Contamination of Water Sources Viewed	49
Hydrogen Sulfide Proposed as Alternative Energy Source	51

WEST EUROPE

REGIONAL AFFAIRS

EBRD Grants DM44.4 Million for Cleanup of Baltic Sea	53
EC Backs Dutch R&D Scheme for Environmental Technology	53
EC Approves Renewable Energy, Conservation Plan in Germany	53

FRANCE

EC Tightens Dangerous Waste Laws	54
Mitterrand Calls for Tax on Energy Utilization	55
Radioactive Waste Sites Inventory Includes Military Sites	55

GERMANY

German Expert Criticizes Environmental Research Quality	56
Schroeder Discusses Nuclear Waste Disposal	58
Lack of Infrastructure Hampers Use of Natural Gas as Motor Fuel	59
Electronic Scrap Volume Reduced by Better Planning	60
Early Warning Device Developed for Water, Soil Contamination	61
Controversy Over Transport of Radioactive Waste Continues	62
Environment Minister Toepfer Presents 1992-93 Report	62
Bonn, Hanover Quarrel Over Nuclear Waste Shipments	63
Lag Noted in Enforcement of R-Value Ordinance	63
New Waste Disposal Process Reduces Dump Site Opposition	64
Minister Says Nuclear Waste Shipment to Gorleben Postponed	64

IRELAND

Environment Minister Tells Survey Results	65
---	----

ITALY

Report: Italy 'Unprepared' for Environmental Challenges	65
---	----

LUXEMBOURG

EU To Tighten Ozone-Unfriendly Gas Controls	66
---	----

NORWAY

Study Examines Undersea Dumping of Carbon Dioxide Emissions	66
---	----

UNITED KINGDOM

Environmental Concerns Over Nuclear Dump Told	67
Radioactivity Report on Water Near Nuclear Sites	68

INTERNATIONAL

PRC, Germany Step Up Cooperation in Nuclear Waste Storage	69
Chinese Nuclear Test Affects Radiation in Central Asia	69
G-7 Communique Analyzed	69

REGIONAL AFFAIRS

Africa Environmental Reports

AB2007161094

Ghana

Accra Ghana Broadcasting Corporation Radio Network in English at 1800 GMT on 23 June reports that President Rawlings has sworn in a 19-member National Forestry Commission to check forest depletion and environmental degradation. The members were urged to draft strategies and work hand in hand with the Ministry of Lands and Forestry on environmental issues.

Accra Ghana Broadcasting Corporation Radio Network in English at 0600 GMT on 27 June reports that a women's association in the Brong Ahafo Region has created a three-hectare demonstration wood lot in the region to encourage other people to undertake afforestation projects. The association has so far planted 4,000 seedlings of acacia and teak under its five-year development program.

London BBC World Service in English at 1705 GMT on 6 July reports that the Agriculture Ministry is trying to check a plant disease that destroys plantains and bananas by causing plant leaves to wilt and change color, and which is spreading rapidly. This disease caused a reduction in banana and plantain production from 50,000 to 25,000 metric tons in 1993. The spread of the disease might also affect cocoa production since banana and plantain trees are usually planted to provide shade for cocoa trees. The Agriculture Ministry has, therefore, launched a control program in the Central Region and is distributing chemicals for spraying the plants. It is also distributing a new hybrid plantain which is resistant to the plant disease.

Accra DAILY GRAPHIC in English on 25 June reports that "soil erosion is threatening the very foundation of the overhead bridge at the Kwame Nkrumah Circle in Accra." A portion of the embankment to the bridge has been "deliberately" removed thus "exposing the land to serious erosion." Some residents in the area near the bridge have been digging the top soil of the embankment to fill their homes "without any considerations to the stability of the bridge."

Nigeria

Kaduna Radio Nigeria in English at 1700 GMT on 4 July reports that the Akwa Ibom State government has requested the assistance of the Federal Government in controlling erosion in the state. The state governor made the request when the Federal Environmental Protection Agency director general paid a call on him. The state administrator said there is the danger of erosion completely cutting off some communities. Furthermore, he said that the Abana and (Aka Bong) Islands in the Bakassi Peninsula are also under threat of sea erosion. Regarding oil spills, he said oil companies in the area are not always able to tackle oil spills effectively.

Tanzania

Dar es Salaam Radio Tanzania External Service in English at 0400 GMT on 23 June reports that the United Arab Emirates has donated more than 50 million shillings to Tanzania to help enhance the protection, conservation, and management of wildlife activities in protected areas in Tanzania. Paul Mkanga, principal secretary of the Ministry of Tourism, Natural Resources, and Environment, said the donation includes firearms, ammunition, radio call equipment sets, medicine, and motor vehicles.

Zhejiang Adopts Ecological Measures in Farming, Breeding

OW1707030394 Beijing XINHUA in English
0204 GMT 17 Jul 94

[Text] Hangzhou, July 17 (XINHUA)—Xu Yonglin, a farmer in Qingyun Township, Zhejiang Province, has got fine returns from breeding animals with grass and vegetables and fertilizing his fields with animal droppings.

The farmer uses rotten vegetables, fallen leaves and green grass to feed pigs, sheep, rabbits and fowls, and spreads the manure and leftover bits of mushrooms in the fields under vegetables and fruits of good quality and high output.

In a plot of only 0.11 ha [hectares], he intergrows vegetables and mushrooms under grapes or between other fruit trees, and has dug a small pond to breed finless eels and wild rice together. Moreover, he breeds grass carp in the irrigation ditches joining the canals and waterways.

Xu has grasped the skills of farming in an ecological and comprehensive way, with knowledge he learned from books.

Xu's family earned 2,600 yuan per person last year, while in 1990 the figure was only 1,200 yuan. It has built a two-story house and has bought lots of furniture and electrical household equipment.

So far, there are 500 ecotype farms in Zhejiang, like the farm of the Xu family. Among them, Shanyi, Lijia and Tengtou Village farms have been included among the "500 best in the world", a title of honor conferred by an environmental body of the United Nations.

Farmers use ecological principles in their planting and breeding operations to make full use of natural resources and ecological transformation, and improve the environment for agriculture.

They go in for farming, forestry, stock raising and industry ecologically and comprehensively in plain areas, networks of waterways, mountainous regions, small valleys and even courtyards of households.

The Dengta Chicken Farm in the village of Dujia, Shiqiao County, invested 450,000 yuan in 1988 to build a methane-generating pit of 500 cu m [cubic meters] and conveyance facilities, which help dispose of the manure of fowls and provide bio-gas for cooking and heating. The dregs are retrieved from the pit and processed into feed for fish and pigs.

Dengta has become a large base for fowls, eggs and meat products for Hangzhou, the capital of Zhejiang. As an efficient and non-polluting chicken farm, Dengta provides over 500,000 kg of eggs every day for the city.

Farmers in Tengtou, a low-lying village in the east of Zhejiang, have built a network of underground irrigation and drainage pipelines in paddy fields, planted stretches

of oranges and grapes along the village canal, and raise aquatic products in the canal and ponds.

The ecological cycle ensures not only stable yields irrespective of drought or excessive rain but also benefits the environment.

Ecotype agriculture deals with a wide range of disciplines and needs harmonious co-operation of scientific institutions and governmental departments of agriculture and environmental protection.

Zhejiang set up China's first institute of agricultural ecology, at Zhejiang University, and monitors the ecosystem with due care.

During the Ninth Five-Year-Plan period (1996-2000) Zhejiang will establish a group of exemplary zones of ecological and comprehensive agriculture, and spread the advanced technology all over the province.

Zhejiang Makes Progress in Environmental Protection

OW1707032894 Beijing XINHUA in English
0247 GMT 17 Jul 94

[Text] Hangzhou, July 17 (XINHUA)—East China's Zhejiang Province has made good progress in mitigating air and water pollution, according to the provincial environmental protection bureau.

To alleviate air pollution, nine cities of Zhejiang Province including Hangzhou, capital of the province, have taken steps to upgrade furnaces, cooking stoves and kilns and install dust-removing equipment.

While setting up 275 sq [square] km of smoke and dust control zones, Zhejiang has paid attention to cleaning up and controlling pollutants in eight major rivers and lakes, including the West Lake, a scenic spot in Hangzhou.

So far a 10-km-long sewage pipe has been laid around the West Lake, and fresh water has been diverted from the Qiantang River to the lake.

Besides, a smoke-free zone has been set up and afforestation has been expanded around the West Lake.

The Shaoxin City Government has built three diversion works in the southern district and laid 24 km of sewage treatment pipes around the city. It has also harnessed 17 streams running across the urban area so far.

The provincial environmental protection bureau has a research institute and a monitoring center, while various counties and some large enterprises have built monitoring stations. These organizations employ about 2,600 people.

Beijing Increases Development of Oceanic Resources

*OW1807063694 Beijing XINHUA in English
0457 GMT 18 Jul 94*

[Text] Jinan, July 18 (XINHUA)—China is tapping its rich natural oceanic resources to service its rapid economic expansion.

In the late 1980s local governments in the coastal areas began to list the development of the marine economy on their agendas.

Southeast China's Fujian Province is making an overall development of its beach and offshore areas, and east China's Shandong Province has reported that the gross output value of its marine economy totalled more than 30 billion yuan last year, ranking first among coastal provinces in the country.

According to Yan Hongmo, director of the National Bureau of Oceanography, the output value of China's key oceanic industries rose from 6.4 billion yuan in 1978 to 43.8 billion yuan in 1990 and to 90 billion yuan last year.

At present, China's annual output of aquatic products reaches 17 million tons, ranking first in the world.

It has more than 600 ocean-going fishing boats and its major ports are able to handle 500 million tons of cargo a year.

China has sunk eight offshore oil and gas fields, which turned out more than five million tons of oil last year.

Ecological Agriculture Practiced on Loess Plateau

*OW1807081994 Beijing XINHUA in English
0804 GMT 18 Jul 94*

[Text] Lanzhou, July 18 (XINHUA)—Provinces and autonomous regions on the loess plateau, which suffers from serious soil erosion, have been trying hard to promote ecological agriculture.

The loess plateau consists of Qinghai, Gansu, Shaanxi, Shanxi and Henan Provinces, and the Ningxia Hui and Inner Mongolia Autonomous Regions, covering an area of over 600,000 sq [square] km. Each year 1.6 billion tons of silt are washed away into the Yellow River.

The seven provinces and two autonomous regions have been experimenting with the establishment of more ecological agricultural zones as one of major measures to prevent and control soil erosion on the vast plateau.

The ecological agricultural development zone in Tuanjie township, Gansu Province, one of the country's less-developed areas, is a great success.

Scientific workers at the Gansu Provincial Academy of Agricultural Sciences have helped the township set up an ecological agricultural development zone compatible with the principles of agro-ecology and systems engineering.

As a result, the township has become Dingxi Prefecture's first in which per capita grain output is over 500 kg.

Local farmers have so far planted 6.66 million ha [hectares] of trees and over 1.33 million ha of forage grass, and built some four million ha of farmland on the loess plateau.

In addition to promoting ecological agriculture, Gansu has also invested heavily in constructing a group of hydroelectric pumping stations along the Yellow River for irrigating dry farmland in the center of the province, and introduced foreign funds to harnessing local rivers.

China has co-operated with Australia to build the Qingyang loess plateau experimenting station, which is aimed at finding an ecological harnessing model for a coordinative development of agriculture, forestry and animal husbandry on the loess plateau.

Shaanxi has adopted flexible policies in its northern areas and has aroused local farmers' initiative in harnessing rivers and taming mountains.

Tree-planting technology research on the loess plateau has begun to bear fruit in seven experimental centers.

Local scientific workers have achieved success in raising the survival rate of trees on the arid hills on the loess plateau by without using irrigation [as received].

Scientific researchers with the local provincial or regional academies of agricultural sciences, local administrations of water and soil preservation, and schools of agriculture, forestry and animal husbandry, have also made efforts to experiment with dry cropping and have achieved initial success.

Clampdown on Polluters Focuses on Township Enterprises

*HK1907063094 Beijing CHINA DAILY in English
18 Jul 94 p 1*

[By Zhu Baoxia: "Polluters To Be Fined or Jailed"]

[Text] The government is clamping down on polluters in a bid to enhance the nation's environment.

Violators of environmental laws will face severe fines and possibly jail terms, said a top official of the National Environmental Protection Agency (Nepa).

The National Peoples Congress (NPC), China's legislature, is set to revise existing laws and formulate new ones in order to tighten pollution control, said Nepa Director Xie Zhenhua in an interview with China Daily.

Under the revised State Environment Law all work units will be required to pay for discharging waste into the environment.

At the moment, the government only charges businesses whose waste exceeds the set limit.

"And the charge is so low that some enterprises prefer to be taxed to investing in new pollution control devices," said Xie.

Under the new legislation, those plants which emit an excessive amount of pollutants will be closed down and violators will face criminal charges.

Administrative personnel will also be required to be stricter in enforcing the law.

The State is currently drafting a new law on solid waste control as well as regulations on protecting natural resources and reducing pollution in township enterprises.

Both the revised and newly-drafted laws and regulations will be publicized by the end of 1996, the director said.

Over the last two decades, the Chinese legislature has enacted four State laws, 20 regulations and more than 300 environmental protection standards.

Some of these laws and regulations were formulated when the planned economy was still in place, and administrative penalties were stressed.

"They must be updated to cater to the new requirements of the market economy," Xie said.

A number of local enterprises are polluting the environment in their pursuit of quick profits.

So stricter economic and legal penalties are needed to curb this trend.

The measures will also improve the standards of environmental administrative personnel. They will undergo training before taking up their posts.

"The Fourth National Environment Conference to be held in autumn next year will also focus on tightening up law enforcement," said Xie.

He said more public awareness is needed of environmental legislation and he invited the public to help supervise law enforcement.

Nepa and provincial environmental administrations receive 40,000 letters each year complaining about environmental problems.

The State will also tighten control on pollution caused by township enterprises, said Xie. But he promised that this will not hamper rural industrial development.

Official Welcomes International Assistance for 'Agenda 21'

*OW0707182694 Beijing XINHUA in English
1446 GMT 7 Jul 94*

[Text] Beijing, July 7 (XINHUA)—A high-ranking Chinese official expressed the wish today that the international community would participate in the implementation of its environmentally sound economic and social development strategy.

Deng Nan, vice-minister of State Science and Technology Commission, told a high-level round table conference on China's "Agenda 21" that China expects financial support and preferential or non-commercial transferring of environmentally sound technologies from other countries in the world to implement the program.

Approved last March by the Chinese Government, the agenda, or a white paper on China's population, environment and development in the 21st century, will give guidance to the formulation of national long- and medium-term programs for economic and social development.

"Formulating China's Agenda 21 so as to implement the sustainable development strategy was the commitment of the Chinese Government to the United Nations Conference on Environment and Development (UNCED) in 1992," said Deng.

She told about 400 participants from both China and other parts of the world that the strategy is more importantly our prudent choice tailored to our experiences, lessons and demands.

"As such, China will mainly rely on itself in implementing its Agenda 21, and meanwhile we expect close cooperation with the international community," the vice-minister said.

However, "the issue of environment and development is such that China can never be separated from the world and vice versa. While looking forward to the assistance of the international community, we will not forget our own obligations," Deng said.

The vice-minister said that China welcomes the involvement of all countries in the implementation of the agenda, which means an involvement in the great undertaking of sustainable development of one-quarter of the world's population.

"It is our sincere hope that international cooperation in this regard will ensure the serious implementation of all obligations of UNCED, the strengthening of the capacity of implementing Agenda 21, the provision of adequate and new extra funds as well as the transfer of environmentally sound technologies on a preferential or non-commercial basis to all developing countries including China worldwide," Deng said.

She said that improving the environment demands substantial financial investment. Many countries start their comprehensive treatment of the environment after their per capita gross national product (GNP) reaches thousands of U.S. dollars. The per capita GNP for China now is only 400 U.S. dollars.

If environmental problems are not addressed, however, the environment will become a serious constraint on China's future development, she warned.

She told the conference that China is strapped with the heavy burden of excessive population growth, which has

become the greatest difficulty in addressing its problem of environment and development.

"Backward modes of exploiting nature in the past 5,000 years has made this piece of land on which the nation relies for existence more and more fragile," she said.

She went on to say that China is among the few countries frequently stricken by natural disasters. It suffers a loss of about 100 billion yuan each year caused by earthquakes, typhoons, storms, floods, droughts and plagues of insects.

Moreover, China's per capita possession of natural resources is relatively small, with per capita fresh water possession at only about 28 percent of the world's average, arable land at 32 percent, forest cover at 14 percent and grass resources at 32 percent, Deng said.

Despite the great achievements made in the past four and a half decades, the country's overall industrial level is still low, with high consumption of energy resources and rather low economic benefits, she said, adding that the coal-dominated energy structure has caused serious atmospheric pollution.

Ministry Says Chinese Nuclear Test 'Ideally Clean'

LD0707174194 Moscow ITAR-TASS in English
1709 GMT 7 Jul 94

[By ITAR-TASS correspondent Beronika Romanenkova]

[Text] Moscow July 7 TASS—The underground nuclear test carried out by China on June 10 this year, caused no harm to the environment, including the states of Central Asia, ITAR-TASS was told in the public relations office of the Russian Ministry of Atomic Energy today, thus, rejecting the conclusion made by the international geophysical expedition.

The scientists, the newspaper "VECHERNI BISHKEKE" (Evening Bishkek) wrote today, emphasised that after the explosion there was observed a rise in the radioactivity up to the level of 5 microroentgen/per hour in a number of regions, and the nuclear debris was scattered by air from the east to the west.

If the figures obtained by the expedition are correct, then, according to the Ministry of Atomic Energy, China had conducted an "ideally clean explosion", because the level measured in Moscow was not even 5, but 12 microroentgen per hour. As a result of a test carried out in the atmosphere not only so-called radioactive noble gases could enter into the atmosphere, which do not cause such phenomenon as fog and smog related to radioactive particles.

Besides this, the specialists emphasised, China did not violate any juridical sanctions, since that country is formally not a signatory to the treaty on banning nuclear tests in three mediums.

Beijing, UNDP Hold Meeting on 'Agenda 21'

OW0707154594 Beijing XINHUA in English
1416 GMT 7 Jul 94

[Text] Beijing, July 7 (XINHUA)—Vice-Premier Zou Jiahua said here today that China is willing to enter into fruitful co-operation on a bilateral or multilateral basis with countries and regions the world over for the implementation of its environmentally sound economic and social development strategy.

Addressing the opening session of the high-level international round-table conference on China's Agenda 21, the vice-premier said that drafting and implementing China's Agenda 21 and taking the path of sustainable development are the inevitable choice of development by China in the next few years and beyond this century.

"Environmental protection remains a basic state policy. We are taking unremitting efforts to harmonize it with the growth of the national economy," said the vice-premier.

Among those speaking at the conference are James Speth, administrator of the United Nations Development Program (UNDP), and senior officials from the World Bank, the Asian Development Bank, the United States, Japan, Germany and Canada.

The speakers praised China for mapping out and launching agenda 21, making China one of the first to actively follow up on its commitment made at the United Nations conference on environment and development in 1992.

"I believe you have accomplished the most thorough and most broadly supported implementation to date of the earth summit's Agenda 21," speth told about 400 officials at the three-day conference.

He said that the Chinese Government's commitment to mainstream its Agenda 21 as its national development plan is "commendable and worthy of emulation by other countries.

"In considering offering support to China's Agenda 21, I urge countries which are in a position to do so to support China in its efforts to take Agenda 21 seriously, and also to give consideration to how their private companies with international business interests could participate in this important partnership," the administrator said.

Deng Nan, vice-minister of State Science and Technology Commission, told the meeting that China, in addition to self-reliance, expects financial support and preferential or non-commercial transferring of environmentally sound technologies from other countries to implement its Agenda 21.

Xie Zhenhua, director of the National Environmental Protection Agency, said that China has since the early 1970s, especially in the past decade and more, taken a

series of measures to protect its environment and basically stemmed the trend of environmental deterioration, yet urban environmental pollution is still worsening.

Xie said that China will take further measures, including formulating new environmental laws, improving existing ones and investing more in protecting the environment, so as to control and alleviate environmental problems in key polluted regions as the 21st century sets in.

Designed to seek international cooperation and promote China's sustainable development, the first priority programs for China's agenda 21 will be presented to the conference, which is jointly held by the State Planning Commission, the State Science and Technology Commission, the Ministry of Foreign Affairs and UNDP.

Approved last March by the Chinese Government, the agenda, or a white paper on China's population, environment and development in the 21st century, will give guidance to the formulation of national long- and medium-term programs for economic and social development.

Zou Jiahua Calls For 'Sustainable Development'

OW0707113694 Beijing XINHUA in English
0829 GMT 7 Jul 94

[Text] Beijing, July 7 (XINHUA)—Taking the path of sustainable development is the inevitable choice for China in the next few years and beyond this century, a senior Chinese official said here today.

Addressing the opening session of the high-level international round-table conference on China's Agenda 21, Vice-Premier Zou Jiahua said that drafting and implementing China's Agenda 21 and taking the path of sustainable development are the inevitable choice of development in the next few years and beyond this century.

"Reviewing the course of mankind's socio-economic development, we should recognize that the traditional development model, characterized by high consumption of resources in pursuit of quantitative economic growth and "pollution first and its treatment afterwards", can no longer meet the requirements of development that brings population growth, economy, society, environment and resources into harmony," he said. [quotation marks as received]

China's Agenda 21 which was approved by the State Council last March, is a white paper on China's population, environment and development in the 21st century. It is regarded as a strategic document guiding the country's efforts for social development.

"China is a developing country with a population of nearly 1.2 billion which is increasing by 15 million each year," he noted.

"China is faced with the pressing task of developing its economy, removing poverty, raising living standards and improving the quality of life," he said.

"At the same time, China's economic growth has been achieved under the conditions of a large population, scarce per-capita resources and a relatively low economic and scientific level," he said.

Zou said that the Chinese Government has no other choice but to pursue the strategy of sustainable development in order to meet its development targets while protecting China's natural resources and ecosystem for the benefit of long-term and stable development.

"China is willing to enter into fruitful co-operation on a bilateral or multilateral basis with countries and regions the world over for the implementation of its Agenda 21," Zou added.

He noted that China now faces such serious environmental problems as land degradation, desertification, soil erosion, water quality deterioration, shortage of water, flooding and drought, forest and vegetation degradation, and various kinds of pollution.

"However, with limited financial resources and a low technological level, it is not only unrealistic but also against the spirit of sustainable development to lay lopsided stress on environmental protection at the expense of development and in disregard of poverty," he said.

The senior Chinese official said he hoped that the international community would show a keen interest in China's environment and development issues, and do something to help the country.

"At present, China is in the process of deepening reform, opening wider to the outside world and pursuing rapid economic development. The great market potential in China also provides a sound basis for China's co-operation with the rest of the world," Zou said.

Government Issues Rules to Protect Wildlife

OW1407070394 Beijing XINHUA in English
0633 GMT 14 Jul 94

[Text] Beijing, July 14 (XINHUA)—China has issued its first rules detailing penalties for illegal hunting and marketing wildlife.

The rules are expected to seal loopholes that had allowed many criminals who violated the 1988 law for the protection of wild animals to escape punishment.

Such cases had been held up in court for a long time due to the lack of specific penalties in the 1988 law and the criminal law concerning wildlife conservation.

More than 35,000 cases involving 63,000 people have since 1986 been handled according to the regulations and law for the protection of wild animals.

Hundreds of such criminals have been sentenced to life or termed imprisonment and at least four have received death sentences for hunting giant pandas or smuggling panda pelts.

This report contains information which is or may be copyrighted in a number of countries. Therefore, copying and/or further dissemination of the report is expressly prohibited without obtaining the permission of the copyright owner(s).

The rules provide clear-cut and detailed punishments for poaching, killing protected wildlife, forging or reselling hunting permits or permits for importing and exporting wildlife products, and marketing protected wildlife or products thereof.

The rules were drafted and issued by the Ministries of Forestry and Public Security in line with international agreements such as the Convention on International Trade in Endangered Species of Wild Fauna and Flora.

State Council Approval Sought for Dongting Lake Project

HK1307030694 Beijing CHINA DAILY in English
12 Jul 94 p 1

[By Zhu Baoxia: "Flood-Safe and Clean Hunan Lake in 7 Years"]

[Text] A major project designed to turn China's second largest fresh water lake into a flood-safe and pollution-free reservoir is being stepped up and may commence as early as next year.

The re-development of Dongting Lake, which sprawls across northern Hunan Province in the middle reaches of Yangtze River, will be completed in seven years and at a cost of several billion dollars, if the plan meets approval of the State Council, according to official sources.

An official with the Ministry of Water Resources told CHINA DAILY that his ministry is appealing to the State Council to increase the budget for the project.

Huge investments are expected to go into the seven-year-long project said Wang Xiang from the Ministry of Water Resources. The exact figure would be disclosed when the programme receives the final approval, he added.

Meanwhile, XINHUA reported last Tuesday that Hunan Province, where the major part of Lake Dongting is located and where most of the project will be carried out, has submitted its 5-billion-yuan flood-prevention blueprint (\$574 million) to the central government for approval.

Under the plan, dykes will be reinforced while cities, towns and telecommunication networks will be fortified.

The lake, located in the north of Hunan Province, is the main source of income for more than 14 million people living nearby. It is surrounded by 15 grain and aquatic production centres that yield some 40 percent of the economic income of the province.

The industrial and agricultural output value of the lake area last year reached 27 billion and 15 billion yuan (\$3.1 to \$1.7 billion) respectively, accounting for 27 percent and 32 percent of Hunan's total output value.

And yet these are under constant threat because the existing flood-prevention infrastructure is too fragile to withstand severe floods.

Wang Xiang said the State had invested 60 million yuan (\$8.7 million) annually on Dongting Lake since 1984. In addition, every inhabitant in the lake area donates an average of 45 yuan (\$5.17) and each adult works 45 days a year on flood-prevention earthwork.

Most of the pooled money was spent on fortifying dams, dredging river channels, planting trees and constructing high-rise shelters.

Lake Dongting is teeming with 114 species of fish and 873 species of vegetation in the area. Five types of fish including sturgeon and globe fish have been listed under State protection.

The lake can also retard the downward rush of flood water from upper Yangtze River, thus preventing many industrial cities like Wuhan in Hubei Province from being flooded.

Unfortunately, uncontrolled exploration of natural resources and severe damage to the ecological environment have endangered the lake.

The lake has kept shrinking in recent decades, mainly because of silting and land reclamation by local farmers.

Over the past 40 years, 110 million cubic metres of silt enter the lake annually, raising the bed by one metre.

As a result, the lake area has shrunk from more than 4,000 square kilometres in 1949 to the current 2,691 square kilometres.

Experts have warned that the lake could silt up completely within two to three decades if the trend is not reversed.

Floods are more frequent here. Since 1950, 32 floods have occurred in the area. The 1988 flood alone caused nearly 1 billion yuan (\$175 million) in damage.

And whenever it floods, snail fever, a water-borne endemic parasitic illness which makes the belly swell and affects liver functions, strikes. There are 3 million patients with snail fever in Dongting Lake district.

Regulations Issued on Punishments For Killing Rare Animals

OW2207024694 Beijing XINHUA in English
0149 GMT 22 Jul 94

[Text] Beijing, July 22 (XINHUA)—The Ministry of Forestry and the Ministry of Public Security have issued regulations concerning punishments for killing rare wild animals.

The regulations stipulate that Forestry Police are responsible for handling the criminal cases involving the killing, hunting, purchasing, selling, smuggling and stealing of state-protected wild animals.

In the areas where there are no Forestry Police, the local public security organ should take up the responsibility, the regulations state.

State To Conduct Six-Year Environmental Cleanup

HK1307101394 Beijing CHINA DAILY in English
13 Jul 94 p 3

[By Zhu Baoxia: "Green Investment Announced"]

[Text] China will spend over 200 billion yuan (\$23 billion) over the next six years to clean up the nation's environment, according to the National Environmental Protection Agency (Nepa).

Nepa administrator Xie Zhenhua said yesterday that an average 15 billion yuan (\$1.7 billion) was spent on environmental protection annually over the past several years.

China's 23 billion yuan (\$2.6 billion) investment in environmental protection projects last year is expected to increase to 28 billion yuan (\$3.2 billion) this year.

The money will be used to treat pollution, carry out research and develop environmental protection industries, Xie said.

According to Xie, the country has more than 4,000 enterprises that engage in developing and manufacturing products for pollution prevention and treatment.

Most Chinese technology is world class and equipment has been exported to foreign countries, including the United States, Australia and Denmark.

Yet Xie said the environmental protection industry should be further developed to control pollution in the country and the world.

Xie made the remarks at a press conference announcing an international exhibition on environmental protection in Beijing during September next year.

The five-day exhibition will be sponsored by Nepa and organized by the Chinese Association for Environmental Protection Industry, in co-operation with Munich International Exhibition Services Corporation of Germany.

Some 25 State departments, along with various foreign countries—including the European Economic Community—have agreed to support the exhibition, targeted to expand global exchange in environmental research and application.

Cutting-edge products and technologies will be on display and discussions and lectures will be organized.

Gold and silver medals will be granted to the best environmental protection technology, Xie said.

Nation's Efforts To Protect Marine Environment Succeeding

OW1207075594 Beijing XINHUA in English
0715 GMT 12 Jul 94

[Text] Beijing, July 12 (XINHUA)—"Fish is returning to this expanse of water," said Zhao Gang, an avid angler from the Qingdao dyestuff mill.

"Every Sunday and other holidays, I would come here with my hooks and lines. If I am lucky enough, I could hook a dozen kilograms of spotted maigre," the old man said.

But things were not as it is today. "Two years ago, virtually no fish could be found around here," he said. "Our mill discharged waste water into the sea, driving the fish away."

In 1992, the mill spent 16 million yuan building a waste water treatment plant. The water surface around the mill has gradually become neutral.

"It is our duty to build such facilities and solve the pollution problem," said Duan Dongqiang, director of the mill which produces an annual 4,000 tons of dye-stuffs. "Otherwise, we would be punished by law." The plant used to discharge 300 tons of waste-water into the sea a year.

The Qingdao dyestuff mill is only one example to show how the people along the coasts have heightened their sense of responsibility for the protection of the maritime environment.

The government of Qingdao, one of China's 14 open coastal cities in Shandong Province, has set up a special committee to study and protect the environment while spending an annual 40 million yuan cleaning up and controlling pollution sources on shore.

Since 1990 the city has constructed four environmental protection projects by using a loan of 100 million U.S. dollars from the Asian Development Bank.

A survey shows that the amount of major pollutants in the Jiaozhou Bay has dropped steadily since.

China has an 18,000-km coastline and more than three million sq km of territorial waters, accounting for one third of its total territory.

To protect its sea environment, the Chinese Government issued the "Law on Marine Environmental Protection" in 1983, and six supportive regulations later.

Included were the "Regulations Concerning Environmental Protection During Offshore Oil Exploration and Exploitation", the "Regulations Concerning the Dumping of Wastes at Sea", and the "Regulations on the Control and Treatment of Pollutants Which Threaten the Seas".

Localities and departments concerned have set up ocean environment monitoring networks, monitor enterprises which dump waste into the sea, and regularly review the influence of construction on the marine environment.

The country has readjusted the distribution of industries and industrial structure along the coasts and carried out pollution control programs in cities and regions and strengthened the pollution control and management by zoning the functions of the sea environment.

In addition, the Chinese Government has participated in three international pacts to join hands with other countries and regions in protecting the ocean environment around the world.

Thanks to the environmental protection efforts, China has stepped up the pace of developing marine resources. According to Yan Hongmo, director of the National Bureau of Oceanography, the annual output value of China's marine industry has risen from 6.4 billion yuan in 1978 to more than 90 billion yuan at present, while the general quality of the ocean environment remains good.

More Aid Urged for Developing Nations' Environment Problems

HK1207071894 Beijing CHINA DAILY in English
12 Jul 94 p 1

[By He Jun: "More Aid Sought for Green Development"]

[Text] Chinese State Councillor Song Jian called on developed countries to provide "new and additional" funds to help developing nations address developmental and environmental problems.

Song made the remarks at the closing session of the high-level international round-table conference on China's Agenda 21 over the weekend in Beijing.

Song, also Minister in charge of the State Science and Technology Commission, urged the industrialized world to organize and mobilize more financial resources and to create new mechanisms to help developing countries, including China, get onto the path of sustainable development.

Agenda 21, a policy guideline for the country's overall development in the 21st century, was drafted soon after the United Nations Conference on Development and Environment (UNCED) was held in 1992 in Brazil.

At that conference, the Western countries promised to provide more funds and assistance.

Song reaffirmed that it is China's fundamental policy to achieve fast economic growth with a clean environment.

He stressed that the country welcomes foreign enterprises to join its efforts to seek "green" development.

It hopes to introduce more funds and environmentally sound technology to help establish an environmental protection industry.

"I can safely assure ... that the international community stands ready to support China in its pioneering initiative," said James Speth, Administrator of the UN Development Programme (UNDP).

Song told a press conference later that foreign participants reached preliminary agreements or intents with the Chinese side to co-operate in about 40 out of the 62 priority projects on Agenda 21.

These projects cover the areas of clean energy, pollution control, environmental protection legislation, poverty alleviation and sustainable agriculture.

China plans to carry out the 62 projects in about a decade, which will cost some \$4 billion in total.

He estimated that between 60 and 70 per cent of the funds needed will come from the government or banks. He called for international aid to make up the remainder.

While praising China's efforts in realizing its commitment made on UNCED, Speth said that the task ahead for China is very difficult as there is so far no successful model to copy.

Jiang Zemin Meets Deputies to 'Agenda 21' Meeting

OW1007165494 Beijing XINHUA Domestic Service
in Chinese 0908 GMT 8 Jul 94

[By RENMIN RIBAO reporter He Huangbiao (0149 7806 1753) and XINHUA reporter Zhu Youdi (2612 1623 2769)]

[Text] Beijing, 8 Jul (XINHUA)—Jiang Zemin, general secretary of the CPC Central Committee and state president, met with some representatives attending the high-level round table conference on "China's Agenda 21" and had a warm and friendly conversation with them in Zhongnanhai today.

Jiang Zemin said: The Chinese Government has always actively involved itself in the affairs concerning the global environment and development with a high sense of historical responsibility and earnestly desires to intensify its cooperation with various countries and international organizations in this regard.

Speth, UN under secretary-general and administrator of the UN Development Program [UNDP], who was here for the conference, spoke highly of China's tremendous efforts in the work concerning population, environment, and social development. He expressed his support to "China's Agenda 21" and priority projects and programs proposed at the conference.

Smith, president of the U.S. General Motors Company; Strong [name as received], secretary general of the 1992 UN Environment and Development Conference; Singer [name as received], U.S. under secretary of energy; Li Fengrui, vice governor of the Asian Development Bank; Steel [name as received], deputy chief of the Environment Bureau under the World Bank; and other were present at the meeting.

"China's Agenda 21," namely, the "White Paper on China's Population, Environment, and Development," was formulated, in the spirit of the 1992 UN Environment and Development Conference, to promote the strategy for sustainable development in China. According to the State Council's decision, "China's Agenda 21" will serve as an important guiding document in formulating China's medium- and long-term national economic and social

development. The high-level round table conference, jointly convened by the State Planning Commission, State Science and Technology Commission, Ministry of Foreign Affairs, and UNDP, is aimed at organizing the implementation of "China's Agenda 21" and seeking extensive international cooperation and support.

Song Jian, state councillor and minister in charge of the State Science and Technology Commission; Deng Nan, vice minister in charge of the State Science and Technology Commission; and others were at the meeting.

Minister: Beijing To Investigate Random Afforestation

OW1207163694 Beijing XINHUA in English
1447 GMT 12 Jul 94

[Text] Beijing July 12 (XINHUA)—China is carrying out a nationwide investigation into random chopping of

woods, poaching and illegal timber trading, said Xu Youfang, minister of forestry.

Addressing a recent national forestry resources protection Conference, the minister said that during the past decade, China has made great achievements in cultivating wooded areas and lumber storage. However, random felling is becoming a serious problem.

Some areas have gone far beyond the country's quota for local lumbering, and there are some severe cases of illegal cutting and transport of trunks and illegal processing and trading of timber, cases of damaging or trespassing upon wooded lands, and cases of poaching of wildlife as well.

The minister pointed out that during the investigation, all illegal activities must be checked and people involved should be punished.

AUSTRALIA

Canberra May Refuse To Cut Greenhouse Gas Levels

BK1407153794 Sydney THE AUSTRALIAN
FINANCIAL REVIEW in English 29 Jun 94 p 7

[Article by Peter Gill]

[Text] Australia may refuse to take on greenhouse gas reduction commitments if the economic impact on Australia was too high, the Minister for Foreign Affairs, Senator Evans, has warned.

Senator Evans told THE AUSTRALIAN FINANCIAL REVIEW that the option of Australia not accepting climate change commitments had been endorsed by Cabinet.

His comments are the toughest sign yet by a federal minister that the Government will resist international pressure for deep cuts in greenhouse gas emissions.

Senator Evans has also staked out his negotiating ground for the pending debate with the Minister for the Environment, Senator Faulkner, as the Government finalises its position before a meeting of convention signatories next March.

In an interview with the REVIEW, Senator Evans said that Australia faced a "very big problem" on the climate change issue. "We are going to have a huge job meeting even the present sets of targets, quite apart from more rigorous formal commitments that can basically be argued for by others," he said.

The Climate Change convention, ratified earlier this year, has a very imprecise goal of reducing emissions of greenhouse gases like carbon dioxide to 1990 levels by the year 2000. Germany and the U.S. among others are pushing for much tougher commitments.

The Cabinet's 1991 decision on reducing emissions was "subject to Australia not implementing response measures that would have net adverse economic impacts nationally or on Australia's trade competitiveness, in the absence of similar action by major greenhouse-producing countries".

Senator Evans said Australia had a "genuine responsibility ... to do our part in addressing what is a huge worldwide problem". But he added: "If we do take a self-interested position, if we do observe the full rigour of that Cabinet decision—ie just don't accept something that would work to our competitive disadvantage—it wouldn't make all that much difference ... because whatever the political significance of our position might be, the environmental significance in terms of what we contribute to ... (greenhouse gases) is really minuscule."

Asked specifically if non-acceptance of commitments was an option, Senator Evans said: "Non-acceptance is an option. I mean, Cabinet has stated that, yes." These comments go much further than his previous remarks on

the issue. In a Senate Estimates Committee hearing last month, he declined Opposition overtures to say that Australia would stand out against a global consensus on a particular emission reduction target.

After noting that non-acceptance was an option, Senator Evans added: "We will be working like hell to try and get that sort of burden-sharing concept to be accepted and some recognition of the difficulty that we, and a handful of other almost totally fossil fuel-dependent countries, have."

A "burden-sharing" arrangement—recognising that countries like Australia, as an exporter of processed energy like aluminium, is emitting production gases for buyers of those goods—has been a major demand of the business sector.

Editorial Assesses Environment Minister, Green Policy

BK1407160594 Sydney THE AUSTRALIAN
FINANCIAL REVIEW in English 30 Jun 94 p 20

[Editorial: "Faulkner and Green Policy"]

[Text] Where is Senator Faulkner really going on environmental policy? Like Senator Evans, the new Environment Minister seemed to be preparing the way for a major climb-down on the issue of greenhouse emissions.

However, it is not clear whether Senator Faulkner is ready to apply a similarly realistic approach to other important areas of his portfolio.

On the issue of greenhouse gases, Senator Faulkner was less straightforward than Senator Evans. Senator Evans told THE AUSTRALIAN FINANCIAL REVIEW that Australia may refuse to take on greenhouse gas reduction commitments if the economic impact on Australia was too high.

The option of not accepting climate change commitments had been endorsed by Cabinet.

Senator Evans went on to (correctly) observe that Australia's contribution to the level of greenhouse gases was "really miniscule".

There were hints of this pragmatic approach in what Senator Faulkner had to say. Australia would remain active in implementing the Framework Convention on Climate Change "consistent with the well-known caveats" and keeping "all policy options open to consideration".

The Government's most important caveat is of course that Australia would do nothing "that would have net adverse economic impacts nationally or on Australia's trade competitiveness, in the absence of similar action by major greenhouse-producing countries".

Whatever policy options are open to consideration, it is a fair bet that they add up to the same bottom line: Australia will not make major cuts in its contribution to the level of greenhouse gas emissions. According to the

Australian Bureau of Agricultural and Resource Economics, the cost of meeting the proposed "stabilisation" target of 1990 levels of emissions by the year 2000 would be about \$9 billion a year. The likely cost of meeting the Government's far more ambitious interim planning target is claimed by the Business Council of Australia to be more than \$40 billion.

The preferred Australian position is to do a deal on "burden sharing" which recognises the difficulties faced by "energy-based" economies such as Australia.

But, regardless of what deals are on offer, the Australian electorate is not going to pay a huge economic cost in order to make a tiny difference to an environmental "problem" the significance of which is still the subject of genuine scientific dispute.

On other environmental issues, the direction of policy is less obvious.

For example, Senator Faulkner stated his commitment to the policy objective of phasing out woodchip exports from native forests by the end of the decade.

Perhaps he could do little else, since the objective was adopted by the Federal and State Governments at the 1991 Special Premiers Conference.

However, the policy is subject to wide differences of interpretation. Many environmentalists and Government backbenchers choose to regard it as a commitment to virtually ban woodchip exports after 2000.

A less radical, and undoubtedly more correct, interpretation of what the Prime Minister and Premiers had in mind was a hope that the natural development of plantations and "value-adding" would see the decline of woodchip exports from native forests.

There is a vast difference between the two. Federal Government intervention, under pressure from the environmental lobby, has already done considerable damage to the woodchip industry and in the process has probably retarded the development of both plantations and value-added industry.

The Industry Commission last year reported that the Federal system of export licensing had restricted the ability of sawmillers to dispose of sawlog residues as woodchips.

Chips can account for more than one-third of the volume of hardwood sawlogs. The restrictions on exports can therefore undermine the financial viability of value-adding sawmilling activity.

By holding down the domestic price of wood, the export restrictions are also likely to have had the unintended consequence of discouraging investment in plantations.

The further use of export restrictions and other intervention to try to engineer the development of value-added

industries and plantations will impose further unnecessary costs on the industry and the wider economy.

Indeed, the forest industry had good reason to fear increased Federal intervention in the name of the environment.

Senator Faulkner's policy statement appeared to signal a more stringent approach to the logging of old-growth forests and wilderness areas.

The forest industry may be about pay the cost of the Government's attempt make up to the environmental lobby for the backdown on greenhouse. [Sentence as received]

Government Said Breaking Hazardous Waste Agreement

BK1007133594 Melbourne Radio Australia in English 1100 GMT 10 Jul 94

[Text] The Greenpeace Environmental Organization says the Australian Government is deliberately misleading the international community and Australians about its commitment to the Basel Convention banning the export of hazardous waste.

Greenpeace says Australia's position on the Basel Convention became clear at the end of the second negotiating session for a South Pacific convention which would ban hazardous waste being imported into the region. Greenpeace claims Australian officials at the Suva meeting, which ended on Friday [8 July], opposed any reference to the Basel agreement. It was claimed Australia tried to restrict any commitment to a ban on hazardous waste exports to the South Pacific only. Greenpeace says this goes against the Basel Convention which bans hazardous waste trade between member countries of the Organization of Economic Cooperation and Development, OECD, and nonmembers.

CAMBODIA

Columnist Finds Fault With New Timber Export Policies

BK1207074494 Phnom Penh THE CAMBODIA DAILY in English 8-10 Jul 94 p 7

[Part 1 of 2 from the "Local Analysis" column by Suzan Mackley: "Timber Transfer May Hurt International Donor Image"]

[Text] In their widely-publicized letters of June 17 to neighboring Thailand, Vietnam and Laos, Co-Premiers Hun Sen and Prince Ranariddh abolished all controls and procedures previously necessary to export timber. The new policies offer a more clear-cut process, involving only the approval of the co-premiers for the Ministry of Defense to arrange exports.

This report contains information which is or may be copyrighted in a number of countries. Therefore, copying and/or further dissemination of the report is expressly prohibited without obtaining the permission of the copyright owner(s).

But this arrangement may not only sap funds desperately needed by other ministries previously allocated this revenue, but it also makes the national budget far less transparent.

In an industry plagued with exploitation and corruption, strict procedures had been established by the Ministry of Economics and Finance and the Ministry of Agriculture, Forestry and Fisheries to provide inventory information on forest resources and revenues.

The Finance Ministry attributes these former controls and procedures to the considerable increase in tax revenues from the export of timber in the first quarter of 1994.

Even a forfeiture tax was collected on timber arriving in Thailand from Khmer Rouge areas. This was possible due to a Certificate of Origin [C-of-O] furnished by Cambodian customs officials. The "C-of-O" was also a final means to assure adequate resource inventory. Its use has also been abolished.

The new program circumvents these controls, promising that all revenues from timber exports will be unaccounted for in the national budgetary process.

Future export will therefore violate The Law on the Budget for 1994 (LB), as well as the Law on Financial Structures (LFS), both approved by the National Assembly on 28 December 1993. LB and LFS were created to avoid fraud or "other illegal activity which could unbalance the (National) budget."

LFS Articles 11 and 12 state "all state revenue must be deposited in the state treasury, in full, immediately after its collection by state institution...for use in supporting total state expenditures."

Sources in the international donor community in Phnom Penh say budget control and customs administration are key areas in assessing the strength or weakness of countries. Benchmarks of "macroeconomic and structural actions expected" by the IMF include budgetary reviews and bringing "off-budget expenditure ministries back within central control."

Such steps toward "budgetary transparency" have been credited with winning pledges of up to \$1.7 million [as published] at the 1993 and 1994 International Conferences on the Reconstruction of Cambodia (ICORC).

Whether the new logging arrangements signal a trend toward less transparency remains to be seen.

But as the World Bank begins its formal appraisal for technical assistance next week and the International Monetary Fund's (IMF's) \$120 million Enhanced Structural Adjustment Facility (ESAF) Program gets underway, some funding insiders speculate that the new timber revenue arrangements may give donors serious pause for thought the next time they open their checkbooks.

INDONESIA

Editorial Views Pros, Cons of New Sea Law

BK0707140794 Jakarta SUARA PEMBARUAN
in Indonesian 20 Jun 94 p 2

[Editorial: "'Big Leaps' Are Expected in November"]

[Text] General (Retired) Edi Sudrajat, minister of defense and security, recently said there will be a very basic change when the new international Law of the Sea Treaty adopted at the third United Nations convention on the Law of the Sea is ratified in November. We agree with the minister's statement because the United Nations Convention on the Law of the Sea contains several "big leaps" governing activities in the high seas, which have never existed in history.

The convention on the Law of the Sea in 1992 has a dual significance for Indonesia. On the one hand, all the principles and aspects of an archipelagic state that Indonesia has been fighting for since the first UN Convention on the Law of the Sea in Geneva in 1958 are based on the "Juanda Declaration" adopted on 13 December 1957 and have been recognized by the international community. On the other hand, we saw the expansion of the Republic of Indonesia's territorial rights and sovereignty.

As we all know, the Law of the Sea adopted at the third UN Convention on the Law of the Sea went through a long period of negotiations, which lasted for about eight years. The document was signed by 117 participating countries, including Indonesia plus two nongovernmental unions in Montego Bay, Jamaica on 10 December 1982. Even though the document was signed in 1982, it has not yet come into effect. According to the closing declaration, this is because the convention was held just 12 months after the previous treaty was ratified by 60 signatory countries. The number of countries required to strengthen the treaty was reached in November 1993. This will enable the new International Law on the Sea to become effective as of November this year. Indonesia ratified the treaty through Law No. 17/1985.

The convention is said to contain several "big leaps" because the impact brought about by the treaty supplement the political and economic strategies of Indonesia and will create a balance in the world's supremacy. It is said to be so because one part of the convention rules the codification over the existing Law of the Sea while the other part deals with the expansion of the Law of the Sea, particularly on the 12 miles width of territorial waters and the continental shelf.

But what is more important is that the 1982 convention has given birth to new international laws such as ones on an archipelagic state, 200 miles of Exclusive Economic Zone (EEZ), and deep seabed mining which will be scaled down by the International Seabed Authority under the supervision of the United Nations. The

authority will also control the tapping of natural resources in the seabed and subsoil in accordance with United Nations General Assembly Resolution No. 2749. The resolution states that the natural resources in that area is a common heritage of mankind.

The convention brings tremendous advantages to Indonesia. But in the reverse, the convention demands several obligations from Indonesia as an archipelagic state. Among other things, Indonesia has to guarantee the right of innocent passage and ensure the right of unimpeded passage through designated archipelagic sea lanes to foreign vessels. These are very heavy responsibilities because they have wide-ranging aspects.

On the EEZ, Indonesia is burdened with several responsibilities such as to ensure all ships and planes have the right of passage; every country will have the freedom to install undersea cables and pipelines; and an exclusive right to the minerals, fish, and other marine life in the waters in the zone. For this, Indonesia has the duty of guaranteeing the maximum sustainable yield of marine life resources in the zone.

Indonesia also is compelled to fix the allowable catch of marine life. It is very important for Indonesia to carry out all the responsibilities because fishery itself is bound by regulations. Indonesia has not been able to enjoy the maximum capacity to harvest because the marine resources have not been totally exploited yet. Thus, the amount of fish that makes the difference between the amount of resources caught and the capacity to harvest could be acquired by other countries that have been granted permission by the Indonesian Government to do so.

Indonesia has to conduct academic research to discover the fishing potential in its EEZ before it can assume such responsibilities. This is a relatively time-consuming and heavy task and one that requires a huge amount of funds.

Once the 1982 Law of the Sea comes into effect, there will be more responsibilities Indonesia has to shoulder. The government has been thinking of setting up a Maritime Department to fulfill the existing laws on maritime affairs by adjusting them to the ones adopted at the convention. The department is also expected to deal with a series of responsibilities and other related complicated rules governing the high seas.

JAPAN

Agency Monitors Say ODA Lacks Concern for Environment

*OW1807134194 Tokyo KYODO in English
1025 GMT 18 Jul 94*

[Text] Tokyo, July 18 KYODO—More people think Japan's official development assistance (ODA) lacks sufficient concern for the environment than otherwise, but a significant number do not even know Japan is the world's largest ODA provider, an environment agency survey released Monday shows.

The agency relied for its survey on replies from 1,500 "environment monitors," a cross section of ordinary citizens around the country whom the agency regularly taps for information on issues affecting the community and the environment.

The agency compiled the survey from mailed questionnaires returned from 1,374 of the monitors in December.

Only 41.3 percent, or less than half, said they know Japan is the world's largest provider of ODA, a position it had attained by 1992, disbursing some 1.4 trillion yen annually.

And 31.7 percent said they did not know the amount was as large as this.

But 38.6 percent of respondents said the ODA is granted without sufficient consideration for the environment compared with other developed countries.

This was 12.2 percent more than those who said the ODA takes sufficient account of the environment.

The survey found that 18.4 percent think Japan's ODA causes serious damage to the environment in recipient countries.

But 60.5 percent of people supported the concept of giving yen loans as ODA, with 65.1 percent of these saying such loans better encourage self-help on the part of the recipients than straight grants of money.

Only 28.7 percent agreed with the contention by developing countries that developed countries should assume responsibility for solving global environmental problems, whereas 66.6 percent said they expect some effort from developing countries as well.

Tokyo To Spend 2 Billion Yen for Biodiversity Protection

*OW0707133794 Tokyo KYODO in English
1148 GMT 7 Jul 94*

[Text] Tokyo, July 7 KYODO—Japan will spend almost 2 billion yen in the current 1994 fiscal year on measures to preserve a vast diversity of plants and animals in an increasingly endangered global environment, the Environment Agency said Thursday [7 July].

The Ministry of Agriculture, Forestry and Fisheries will disburse the lion's share of 1.24 billion yen out of the total 1.98 billion yen for some 23 preservation projects such as surveys for the sustainable management of rain forests or the gene-mapping of plants in Asia.

The agency's own 14 projects, including management of a biodiversity data bank and protection of Asian wetlands, will get 537 million yen from the national budget.

This report contains information which is or may be copyrighted in a number of countries. Therefore, copying and/or further dissemination of the report is expressly prohibited without obtaining the permission of the copyright owner(s).

The remaining sum was allocated to works under supervision by the Science and Technology Agency, the Education Ministry and the Ministry of International Trade and Industry.

The agency collated expenses for biodiversity measures during the first meeting of government agencies and one month after the International Biodiversity Treaty came into force.

Government Decides To Ban Trade in Hawksbill Turtles

OW1507040894 Tokyo KYODO in English
0342 GMT 15 Jul 94

[Text] Tokyo, July 15 KYODO—The Japanese Government formally decided Friday [15 July] to ban trade in the hawksbill turtle, finally and fully embracing the Convention on International Trade in Endangered Species which prohibits commercial trade in the hawksbill, officials said.

The officials said Japan, citing an exemption, has so far continued to import annually up to 30 tons of the hawksbill, a sea turtle whose shell is used for making hair ornaments and other accessories although domestic law has sharply curbed imports and exports.

Friday's cabinet decision ends the exemption claimed by Japan under the convention's rules.

In addition to the ban on trade in hawksbills and related products, the decision puts an end to all domestic trade in stuffed and live specimens.

Under the exemption, which applied after Japan signed the convention in 1980, Japan annually imported up to 30 tons of hawksbills or hawksbill products, commanding some 90 percent of the world's trade in hawksbills.

But under pressure at home and from abroad, Japan in 1989 banned the import of stuffed hawksbills or their finished shell products, and in October 1992 completely banned the import of raw hawksbill shell.

Agency Panel To Study Introduction of Environment Tax

OW1407022694 Tokyo KYODO in English
0145 GMT 14 Jul 94

[Text] Tokyo, July 14 KYODO—The Environment Agency will set up an in-house panel next month to study the introduction of an environment tax aimed at reducing emissions of gases produced by burning fossil fuels, agency sources said Thursday [14 July].

The advisory panel to the director of the agency's Planning and Coordination Bureau will study the effects on the economy and on carbon dioxide emissions of a possible environment tax imposed on oil and other fossil fuels, they said.

The panel, to be chaired by Prof. Hiromitsu Ishi of Hitotsubashi University, will also discuss whether the tax should also be imposed on electricity generated by nuclear power plants, and ways to collect the tax and at what rate it should be set.

A Finance Ministry institute earlier proposed to introduce an indirect environment tax, saying it could contribute to protecting the environment.

Introduction of the new tax, however, is likely to meet strong opposition from business circles.

The Netherlands and Sweden have introduced similar taxes to reduce carbon dioxide emissions.

Environment Agency To Monitor Industrial Chemicals Flow

OW2207015094 Tokyo KYODO in English
0036 GMT 22 Jul 94

[Text] Tokyo, July 22 KYODO—The Environment Agency will create a registration system to monitor the outflow of industrial chemicals into the environment, agency sources said Friday [22 July].

Several hundred toxic or massively used industrial chemicals will be monitored, with companies required to report to the agency the amount of these chemicals they dump into the environment, the sources said. The new system will facilitate the planning of pollution prevention measures and help enhance corporate control on the disposal of chemicals, they said. The United States has adopted a similar system covering some 300 chemicals.

The step is also in line with the recent call by the organization for economic cooperation and development, which is drafting technological guidelines for such registration systems.

Currently in Japan, only 14 toxic chemicals out of tens of thousands of chemicals in use are subject to a government restriction on production and imports, and emission and effluent standards are set for some others.

Zushi Mayor To Resign Over U.S. Military Housing

OW2207042694 Tokyo KYODO in English
0342 GMT 22 Jul 94

[Text] Yokosuka, Japan, July 22 KYODO—The Mayor of Zushi, Kanagawa Prefecture, said Friday [22 July] she will resign over the decade-long, politically charged dispute about building U.S. military housing on a nature reserve in the city.

Mitsuyo Sawa told a city assembly committee that she will step down as soon as a compromise agreement over the issue is reached with the government.

Sawa, who was elected to office in November 1992 with a vow to oppose the project, said in May that she will

accept the building of homes for U.S. military personnel on the former ammunition depot on the Ikego hills in the town.

She has asked Kanagawa Prefecture to mediate compromise negotiations with the government, making preservation of part of the area's forest a condition of accepting the project.

The negotiations have been delayed, however, because of strong resistance by critics of the project in the Zushi City Assembly.

Sawa's change of stance drew fire from city assembly members and environmentalists who oppose building the housing complex on the site, one of the few remaining green spaces in Zushi.

Tokyo Sources Say Norway Wants Minke Whale Trade Ban Lifted

*OW210711Z94 Tokyo KYODO in English
0912 GMT 21 Jul 94*

[Text] Tokyo, July 21 KYODO—Norway has proposed scrapping a ban on exports of meat from Minke whales caught in Scandinavian waters, a move likely to anger antiwhaling activists, Japanese Government sources said Thursday [21 Jul].

Norway, a longtime critic of the ban on whaling, advanced the proposal to try to drum up support in view of the upcoming meeting of signatory states to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), Fisheries Agency officials said.

CITES is widely referred to as the Washington Treaty as it was signed in the U.S. capital.

The Norwegian move appears to be aimed at gaining international recognition of Oslo's argument that the number of Minke whales in northern Atlantic waters is sufficient to allow resumption of commercial whaling, the officials said.

The treaty categorizes Minke whales in its appendix I, which places a total ban on catches and trade of certain species.

Norway is demanding that Minke whales be reclassified as a species covered by appendix II, which would allow trade provided the government issued a certificate of origin attesting to the fact that the whales were harpooned by its citizens.

The proposal would become an internationally recognized rule only if two-thirds of the treaty signatories approve of it at the upcoming conference.

However, the proposal may get nowhere in the face of staunch opposition from other nations, including the United States and France, which have advocated international protection of whales.

In May the International Whaling Commission (IWC) voted to create a whaling sanctuary in waters around Antarctica.

Norway resumed commercial whaling by setting a voluntary quota of 301 in 1993 after a six-year break, defying an international moratorium on commercial whaling and drawing a U.S. threat of trade sanctions.

Following its 1993 haul of 160 Minke whales, Oslo again pressed ahead with commercial whaling this year.

"Norway appears to be harboring the desire to export whale meat on a commercial basis," Junko Sakurai, an official of the Japan branch of Greenpeace, told KYODO NEWS SERVICE.

"If the proposal facilitated trade in whale meat, the moratorium would be virtually nullified and it would encourage poaching and smuggling by creating greater demand for whale meat," she said.

A Fisheries Agency official said Japan "will neither oppose nor back the proposal for the time being in view of the fact that the IWC has not yet determined the extent of Minke whale resources in the north Atlantic."

MALAYSIA

Tankers, Fishing Boats Blamed for Hydrocarbon Pollution

*BK1407093194 Kuala Lumpur Voice of Malaysia
in English 0600 GMT 14 Jul 94*

[Text] Malaysia's Parliament has been told that the illegal practice of discharging oil waste by tanker ships and local fishing boats has caused several beaches in nine states to be polluted with hydrocarbon. The deputy science, technology, and environment minister, Peter Chin, said the states facing the problem were Johor, Penang, Selangor, Sabah, Negeri Sembilan, Melaka, Kedah, Kelantan, and Terengganu. He said the government had enforced the Environmental Quality Act 1994 to overcome the problem. Under the act, ships and fishing boats found discharging oil waste in the Malaysian waters were liable to be prosecuted and fined.

Kuala Lumpur To Assist Burma in Environment Protection

*BK1207075894 Kuala Lumpur BERNAMA in English
0552 GMT 12 Jul 94*

[Text] Kuala Lumpur, July 12 (OANA-BERNAMA)—Malaysia will assist Myanmar [Burma] to manage the environment and wildlife.

Science, Technology, and Environment Minister Law Hieng Ding said Tuesday officers from the ministry would be sent to Myanmar to help formulate the relevant laws and regulations.

The Myanmar Government looks to Malaysia as a country from which it can learn, particularly in the area of the environment, as we have gone through all the stages over the past 20 years, he told reporters after Myanmar Foreign Minister U Ohn Gyaw called on him at his office here.

Ohn Gyaw, who is leading a seven-member delegation on a three-day visit to Malaysia from Monday, is also in charge of the environment in Myanmar.

Law said Ohn Gyaw had also expressed Myanmar's intention to seek Malaysia's help in the building of infrastructure and training of officers in various fields.

VIETNAM

Some Facts on Environment in Hong Gai-Cam Pha

94WN0323A Hanoi TAP CHI HOAT DONG KHOA
HOC in Vietnamese Apr 94

[Article by Nguyen Dinh Ky and Tran Kim Phuong of the Institute of Geology and Minerals of the Ministry of Heavy Industry and Vu Ngoc Ky of the Mining-Geology College of the Ministry of Education and Training: "The Environmental Situation of the City of Hong Gai-Cam Pha and the Geology-Urban Planning Project for the Future Municipality of Ha Long"]

[Excerpt] The present environmental situation of the Quang Ninh mining area is very serious. The ecological balance of the area is threatened and the lives, activity, and health of the people in the area have been affected. In order to overcome that situation and improve and develop the mining area so that it can become a key economic area in the Hanoi-Hai Phong-Quang Ninh megalopolis, in accordance with the state's economic-social development strategy from now to the year 2000, it is necessary to carry out comprehensive studies and evaluations of the new natural, economic-social, and cultural conditions. That is one of the extremely important contents that will be dealt with in the geological-urban planning study project for the future municipality of Ha Long.

1. The Present Environmental Situation of the City of Hong Gai-Cam Pha:

It has been calculated that every 1,000 tons of coal mined underground results in effluence on the surface of one to 12 kilograms of coal dust and particles, 50 to 70 cubic meters of metal gas, 7,000 to 15,000 cubic meters of carbon dioxide, 55 cubic meters of explosive gas, 55,000 to 135,000 kilojoules of heat, 1,500 to 9,000 cubic meters of waste water, and 210 to 300 tons of earth and rock overburden.

In Hong Gai-Cam Pha coal mining causes the direct pollution of an area 5,497 hectares in extent, 14.2 percent of the entire area. The waste dumping area

amounts to 899 hectares. Machine shops, service enterprises, and areas in between account for the remainder, 1,546 hectares. As of the end of 1988, three open-pit mines—Deo Nai, Coc Sau, and Cao Son—had produced effluence of 651.335 million cubic meters of earth and rock, and by the time mining ends at those mines the total will amount to 1,059 billion cubic meters. The effluence areas of the Cam Pha mining area is exemplified by the stretch between Coc Sau and Cua Ong, which extends along both sides of national route 18A. It also extends along the seacoast for hundreds of meters and is tens of meters high. At the Coc Sau mine it is 255 meters high and at the Cao Son mine it is 280 meters high. During the rainy season the waste areas are eroded and run-off water creates deep pits five to seven meters wide. Earth and rock slide down into hollow places and have overflowed about 200 hectares of vegetable and subsidiary food crop land, ponds, and residential areas. Hundreds of families have had to move to other areas, which has caused a loss of materials and capital invested in building dikes and walls to stop earth and rock overburden and has affected road traffic by flowing over roads and destroying them. Many segments of roads have had to be rerouted or rebuilt. Earth and rock sliding down has stopped up rivers and streams. The bed of the Mong Duong River was raised two meters, the Dien Vong River became choked with mud, and many segments of national routes 18A and 18B were washed away or covered. The water in the river and stream system of the Hong Gai-Cam Pha area has been polluted and many water courses have become muddy. Every year the Dien Vong River, which is 20 kilometers long, supplies 360 million cubic meters of water to the city of Hong Gai. In 1989 the water plant had to cease operations for a time because of the large volume of mud, refuse, and coal dust in the water. That is not to mention the fact that the reservoirs of the muddy Man and Troi rivers flow into Cuoc Be Bay, affecting the Bai Chay bathing beach. Some sources of water that were usable in the past have now been abandoned because the runoff has polluted the water. An example is the Tien stream at Cao Son.

The mining of coal results in forest destruction and a significant loss of capability to retain reserve water in the reservoirs, and has resulted in an increase in the denuded hillside area. Forest land in Quang Ninh declined from 42 percent in 1969 to only 18 to 20 percent in 1985. In a large area extending from Mong Cai to Dong Trieu forests have been heavily damaged, which has resulted in a range of weed-covered, denuded hills hundreds of kilometers long. The Yen Lap reservoir on the Mip River, which was completed in 1980, had a capacity of 118 million cubic meters of water to irrigate 10,050 hectares of agricultural land in Yen Hung District and to meet personal consumption needs. After 10 years of use (1980 to 1990) the water level is 23.5 meters, a reduction of six meters, and its capacity is 60.1 million cubic meters, 50 percent less than the planned capacity. The useful capacity is 51.5 million cubic meters of water, a reduction of 60 percent and sufficient to irrigate only

5,500 hectares of agricultural land, nearly 50 percent less than the planned capacity. The flood situation was quite serious in 1983, 1986, 1988, and 1989. In addition to floods there have also occurred refuse slides and mud slides. On average, the reservoirs have been silted to a depth of 10 meters. The reason for that is that the watershed forests in the basin have been destroyed more and more and have become denuded hills or slash-burn fields.

Water to meet personal consumption needs on islands, always scarce, has become even more scarce and forests on the islands have been cut down, so there is no longer a water retention capability. The destruction of forests and the scarcity of food have resulted in the departure of all kinds of wild animals and the ecological balance is threatened.

The destruction of forests not only directly affects the retention of water resources but has also resulted in lowering the water table and in the saline pollution of the water-bearing strata along the coast. That is not to mention changing the porosity of the strata that have not yet solidified, thus affecting the foundations of structures that have been constructed on the surface. For example, six wells in the city of Hong Gai previously operated 24 hours a day, with a capacity of 7,200 cubic meters, but because of saline pollution the operational time was reduced to two shifts a day, then to one shift a day, but the water is still polluted by salt water.

Every day, the run-off water from the Coc Sau, Mong Duong, and Thong Nhat mines, with a very low pH factor (from 2.5 to 5.8) and a high degree of siltage amounts to between 5,000 and 25,000 cubic meters. Dirty water spills over into the surrounding areas and causes pollution in the mining area and even in the ocean. The sea water is also polluted by surface runoffs carrying effluvia from the production and service installations, from recreation areas, bathing beaches, and population centers along the coast, and from a large number of ships, ferries, and boats operating busily in the big ports, day and night.

Such coal mining activity as drilling, digging, explosions, and transporting coal result in a large quantity of coal dust and coal gas. The volume of dust in the underground mines is about 30 to 50 milligrams per cubic centimeter; in the open-pit mines it is about 4.2 to 680 milligrams per cubic centimeter; and along the roads leading to the mines the dust volume is about 857 milligrams per cubic centimeter and the silica content is about 16 percent. If the allowable standard is 200 dust particles per cubic centimeter of air, in the Hong Gai-Cam Pha area the volume of dust exceeds it by tens to hundreds of times, which results in silicosis.

In brief, from the above data we can see that the mining areas, especially Cam Pha, Hong Gai, and Cua Ong, are indeed heavily polluted by coal dust, dirt, the various sources of run-off water, the overburden and coal cinder heaps, and by a large volume of earth-moving and transport vehicles that operate continually, day and night.

The geological environment of the mining area has been changed and heavily damaged. The vegetation cover has been cut down and burned and no longer amounts to much, and coal mining by many mine operators does not conform to regulations. Removing earth to obtain coal, building roads haphazardly, and creating areas to dump coal, earth and rock, and slag that cover mountain sides, the slopes of hills, ravines, and streams, blocks up the flow of water and destroys the topsoil layer, as exemplified by the Quang Hanh-Nga Hai slope area. Furthermore, the process of dumping earth into the sea from Hong Gai to Cam Pha, Cua Ong, and Mong Duong could quite possibly change the submerged tides or result in silting the shipping channels and the appearance of new sand bars.

The present situation of the natural environment of the Hong Gai-Cam Pha area being polluted has harmed the health of the workers and people due to infection by such respiratory diseases as TB, bronchitis, and silicosis. The Public Health Service of Quang Ninh has had to send aside large amounts of money to prevent and control those diseases.

ALBANIA

German Firm To Take Back 94 Tons of Pesticide Within July

AU0907174494 Tirana ATA in English
1022 GMT 9 Jul 94

[Text] Milot, July 9 (ATA)—Some 94 tons of pesticides, which arrived in Albania from Germany in September 1992 under the label "Melipax," seem to be removed this month from the reserve storehouses of the Milot commune. Gjok Gjoka, chairman of the commune, told ATA that after the negotiation with representatives of the German firm "Grimpix," the 94 tons of pesticides will be evaded within July 1994.

Last March, the poison liquid in the 200 litre barrels leaked out of the storehouse. In face of this situation, Pal Shkurti, responsible for these storehouses, said "we asked the aid of the German authorities of the respective firm who, in the same month, packed up the pesticides in plastic sacks and new barrels. But again the situation is serious as the barrels have begun to leak. Many teams have come on the spot, have filmed and studied the situation, but still, the pesticides boil in the barrels. Let us hope that within July they will be sent back to their original country."

BULGARIA

Air Pollutants Exceed 'Acceptable Levels' in Silistra

AU2107190894 Sofia BTA in English
1824 GMT 21 Jul 94

["Today"—BTA lead]

[Excerpts] Sofia, July 21 (BTA)—[passage omitted] In the last 10 days, the concentration of carbolic acid in the air of Silistra (on the Danube, northeastern Bulgaria) exceeded the internationally acceptable levels from two to nine times, and the content of hydrogen sulphide was up to 2.5 times higher than the permissible limit, Silistra Municipal Mayor Stoyan Plugarov told a news conference, quoted by the local BTA correspondent. Municipal officials will leave for Calarasi, Romania, tomorrow to lodge a formal protest in connection with the chemical pollution of the Bulgarian town. [passage omitted]

HUNGARY

Authorities Begin Search for Nuclear Waste Storage Site

AU1807180794 Budapest NEPSZAVA in Hungarian
15 Jul 94 pp 1,3

[Report by unidentified correspondent: "Where Will the Nuclear Dump Be?"]

[Text] A decision was made recently on the temporary placement of spent nuclear fuel originating from the

nuclear power plant in Paks. However, along with the preparations for the construction of this temporary storage facility, research is currently under way on finding adequate places for the storage of low- and medium-active wastes and for a permanent "nuclear cemetery."

The program carried out under the aegis of the National Committee of Technological Development [OMFB] is primarily searching for the possibility of storing low- or medium-active nuclear waste. The contaminated materials originating from the facility in Paks (like clothes, shoes, tools, and cleaning materials) have always been stored in Hungary. These materials have been enclosed in steel barrels and compressed in order to use less space. Most of this material is generally stored on the premises in Paks, and a smaller part is stored in the dangerous-waste-dump in Puspokladany. This, however, is not a long-term solution.

OMFB official Peter Kardos told us that research is under way on the basis of the so-called negative principle. This means that a place is sought on the basis of exclusion, an appropriate place both economically and geographically; one that cannot be near any population center.

The implementation of this project costs 325 million forints, with 185 million forints provided by the nuclear power plant in Paks, and the rest of 140 million forints provided by the OMFB from the Central Technological Development Fund. A separate tender has been issued to solve the problem of making the project acceptable to the population. According to Jozsef Ordogh, chairman of the National Atomic Energy Office, this can start this fall, when the research is complete. No decision has yet been made on the type of storage: either a surface or an underground facility. According to Peter Kardos, this is a professional issue and both versions have their advantages and disadvantages.

Along with this program, another research project is underway regarding the permanent storage of spent fuel rods. In cooperation with the Atomic Energy of Canada, the Mecsek Ore Mining Company is studying the aleurolyte layers near Boda that, based on the first analyses, seems to be an adequate place.

However, according to Jozsef Ordogh, no decision has yet been made, and the analysis is only theoretical, because the modules of the temporary storage facility in Paks can store the spent fuel for even 50 years if Russia decides not to allow the transportation of this fuel to its territory. The reason for the Canadian participation in the project is that such a permanent storage facility has not yet been constructed anywhere in the world and, therefore, the analysis of the aforementioned layer of aleurolyte is important not only for Hungary. Ordogh denied the speculations that a possible Canadian desire to bring its spent fuel to Hungary in the future is behind the support of the Canadian Government.

Environmental Damage Makes Life Expectancy Lowest in Europe

AU2007095894 Budapest MTI in English
0656 GMT 20 Jul 94

[Text] Budapest, 20 Jul (MTI)—Tumorous diseases that evolve as a consequence of polluted air, water, and food heavily afflict Hungarians by international standards. Life expectancy at birth has been steadily dwindling for 15 years now, and today it is one of the lowest in Europe. During these 15 years the average life span has dropped by about 3.5 years. Meanwhile, fundamental measures are yet to be passed to improve the situation in environmental protection. Information on how to lead a healthy way of life has been inadequate, just like the funds necessary for healing the ill.

Environmental damage has contaminated 44.5 percent of the Hungarian population, while 30 percent live in seriously polluted places. This primarily stems from air pollution caused by industry and public transportation as well as the basinlike location of Hungary (the Great Plain is located deeper). Some 75 percent of the country is situated at an altitude lower than 200 metres above sea level, and thus it is a slow process before the air is scrubbed from noxious materials. Thus the most polluted areas of Hungary are as follows: the Great Hungarian Plain, located in the eastern part, and Budapest, surrounded by hills, and its immediate neighbourhood.

For instance, the lead pollution of central Budapest is 27 times higher than the level permitted, and the quantity of carbon monoxide at some junctions is 87 times higher than the level permitted. Noxious substances find their way into ground water and into running waters that feed the drinking water supply. 80 out of 100 samples taken from mains drinking water in some polluted counties of Hungary—particularly in the north eastern industrial regions—fail to meet basic health requirements. Doctors who examine the impact of environmental damages on the human body say that drinking large quantities of water could reduce the process of toxification that reaches the human body from the air. However, most Hungarians cannot afford to steadily consume mineral water instead of drinking water supplied from the mains.

Due to environmental damage, life expectancy is the lowest in Hungary by European standards. The average life span of males is 64 years, and of females 72 years. Life expectancy at birth has been steadily dropping for 15 years. In 1993 about 150,000 people died in Hungary, 21 percent of malignant tumours, 26 percent of heart disease, and 4 percent of some kind of lung disease, related to environmental pollution. As regards men aged 40 to 49 years, death caused by cancer has increased by nearly 200 percent in the past 20 years. In 1993, some 20,000 men and women died of tumorous diseases in the above age bracket. This puts Hungary on the top of the world rankings of death derived from tumorous diseases for men, and puts it in third place for women. In the past 20 years the number of other illnesses related to

tumorous diseases has also soared. These include high blood pressure, heart and circulatory diseases, respiratory ailments, and allergies.

Fundamental shortcomings have been detected in the health sector. In some—particularly heavily afflicted—counties oncological patient care is totally unknown. This could affect as many as 2.3 million people. In counties where such care exists, there are as few as 20 to 30 beds for 1,000 to 3,000 patients. Specialists say that as long as there are no information programmes or appropriate funds for treatment, only a healthier way of life could offer some kind of protection to Hungarians against the consequences of environmental pollution.

ROMANIA

Penalties for Violation of Environmental Norms

94BA0284A Bucharest MONITORUL OFICIAL
in Romanian 12 Apr 94 pp 2-5

["Text" of Decision on Penalties for Violating Environmental Protection Regulations]

[Text] On the basis of Law No. 9/1973 on Environmental Protection, and of the legal provisions consequent to the ratification of international conventions on environmental protection,

The Romanian Government decides:

Article 1

The following actions are considered as violations of environmental protection regulations if they are not considered infractions of penal law, and they receive the following penalties:

- (1) A fine of 50,000 to 100,000 lei for natural persons and of 100,000 to 250,000 lei for legal persons, for:
 - a) Throwing or depositing household and street waste outside of authorized locations;
 - b) Failure, on the part of landowners and legal administrators, as defined in Article 3 of the Law on Land Resources No. 18/1991, to take cleaning and maintenance measures for unproductive or nonfunctional urban land, including yards and the boundaries of economic and social properties;
 - c) Failure, on the part of public services and responsible economic agents, to take measures for street cleaning, as well as for maintenance and house-keeping of green areas and public squares and parks;
 - d) Failure, on the part of legal administrators, to take measures to restrict the access of mechanical or animal-drawn vehicles within public, rest, or recreation parks, as well as within protected areas, with the exception of those vehicles needed to maintain those areas;

This report contains information which is or may be copyrighted in a number of countries. Therefore, copying and/or further dissemination of the report is expressly prohibited without obtaining the permission of the copyright owner(s).

- e) Organizing sports training, or automobile or motorcycle demonstrations or competitions within rest and recreation areas, protected areas, beaches, and other ecologically vulnerable areas;
 - f) Failure, on the part of agricultural and food market administrators, to take necessary cleaning and hygiene measures within market boundaries;
 - g) The gathering by unauthorized persons, of flowers or other portions of plants in public parks, landscapings, green spaces, street plantings, and along transportation routes;
 - h) The gathering or capturing for commercial purposes and marketing, including export, by unauthorized persons, of plants and animals from the flora and fauna of wilderness areas: resinous plant shoots and buds, water lily flowers, forest fruits and mushrooms, mistletoe branches, fish, crayfish, frogs, snails, shells, leeches, water birds and eggs, small singing birds, and other similar species of wild plants and animals or parts thereof, with the exception of hunting species approved by law. The penalties also apply to market administrators who allow the marketing of these products by persons who do not have an authorization to gather and market them, issued by the appropriate authorities;
 - i) Removing, damaging, or destroying warning markings and panels intended for environmental protection;
 - j) Burning field stubble, wood and grass vegetation, regardless of the land's purpose or owner, including land abutting transportation routes, with the exception of cases permitted by environmental authorities.
- (2) A fine of 100,000 to 250,000 lei for natural persons and of 250,000 to 500,000 lei for legal persons, for:
- a) Failure, on the part of specialized economic entities and public services, to fulfill their specific functions in assuring environmental protection in the sectors for which they are responsible;
 - b) Changing the purpose of land improved as green space, without the approval of the appropriate environmental authorities, as well as erecting buildings or any other improvements within its boundaries. The penalties apply both to those who approve the construction and other improvements, and to those who, by failing to respect legal provisions, erect buildings or any other improvements within green spaces;
 - c) Gathering, holding, and/or marketing plants declared natural monuments, capturing through any means, holding, and/or marketing animals declared natural monuments, as well as displacing, holding, and/or marketing, including through exportation, mineral, speleologic, and paleontologic items from locations declared natural monuments, or from collections of such items, with the exception of cases authorized by environmental and/or other appropriate authorities;
 - d) Refusing access to persons empowered by environmental authorities, to technical installations that make an impact on the environment, to purification equipment and installations, as well as to spaces or areas in which or from which the environment can be endangered;
 - e) Refusing to present to environmental authorities or those empowered by them, data from internal measurements and control of pollutant emission into the environment, as well as other data necessary to verify compliance with legal environmental protection regulations;
 - f) Failure to present, within the deadlines established by environmental authorities, the documentation needed to obtain environmental authorizations;
 - g) Failure, on the part of landowners and legal administrators, to take necessary cleaning and hygiene measures for camping grounds, vacation villages or encampments, cabins, beaches, gasoline and auto service stations, commercial and tourist facilities of any sort, as well as the areas surrounding them;
 - h) Capturing, holding, transporting, marketing, and exchanging land or water wild animals covered by international conventions regarding the international control of trade of wild flora and fauna species threatened with extinction, on the part of persons or legal entities which do not have authorization from appropriate authorities, in accordance with legal provisions;
 - i) Organizing menageries, zoological gardens, or zoos of any sort, without approval and/or environmental authorization;
 - j) Failure to assure and comply with conditions for holding animals in captivity, including domestic animals, consistent with biological space, food, and hygiene requirements, or subjecting them to poor maintenance or treatment incompatible with animal protection regulations;
 - k) Failure, on the part of owners or legal administrators of parks, natural reservations, and zoos, to take necessary measures to maintain wild animals within the conditions of their natural or artificially created habitats, so as to assure the safety of people and prevent harm to property;
 - l) Failure, on the part of natural persons or legal persons, to respect legal provisions regarding the possession, care, supervision, and movement of domestic animals, guard and hunting dogs, household pets, sport animals, and experimental animals. The penalties also apply to specialized public services responsible for implementing and controlling legal provisions regarding the possession, care, and supervision of animals.

(3) A fine of 250,000 to 500,000 lei for natural persons and of 500,000 to 1,000,000 lei for legal persons, for:

- a) Starting and completing any construction and installation work without environmental approval issued by the appropriate environmental authorities;
- b) Placing in operation new production facilities, or changing the nature of existing ones, as well as organizing and conducting activities with environmental impact, without environmental approval issued by the appropriate environmental authorities;
- c) Failure to respect the provisions of environmental approvals or authorizations issued by appropriate environmental authorities on the basis of documentation presented;
- d) Releasing toxins into the atmosphere, water, and ground, as well as producing noises and vibrations beyond the limits accepted by legal standards and regulations;
- e) Failure, on the part of responsible economic agents, to immediately bring to the attention of environmental and other appropriate authorities, the occurrence or imminent occurrence of any accidents that present a danger to environmental quality, the health of the population, animals, and plants, as well as failure to take necessary measures to limit and avoid their negative effects;
- f) Failure, on the part of economic agents which conduct activities dangerous to the environment, to take the special measures stipulated in legal provisions regarding the safety of the operation and utilization of installations and equipment, in order to reduce the risk of accidents with effects on the environment;
- g) Failure to respect legal provisions regarding the fabrication, marketing, distribution, transportation, storage, and use of toxic and dangerous products, including those used for plant cultivation and their packaging;
- h) Failure, on the part of specialized public services and responsible economic agents, to respect legal provisions regarding the collection, sorting, recovery, and recycling of products, of recyclable packaging and waste from industrial, agricultural, urban, and construction activities, as well as provisions regarding the storage, destruction, and neutralization of materials that are not useful;
- i) Failure, on the part of specialized public services, to organize and, on the part of responsible economic agents, to assure ways and means to collect, transport, store, sort, recover, and reuse recyclable packaging and waste from the population, or to store and destroy materials that are not recyclable;
- j) Failure, on the part of owners or legal administrators, to take measures to clean up land that is not

in productive or functional use in conjunction with communication lines along roadways, railways, or navigation channels, including bus stations, train stations, and ports;

- k) Failure to respect legal provisions regarding work-site organization at construction and installation projects;
- l) Destroying, by any means, grass and wood vegetation in existing protection curtains;
- m) Conducting any activities within natural reservations, natural and national parks, biosphere reservations, as well as in other areas with special protection coverage, without environmental agreement or authorization issued by an appropriate environmental authority, or in violation of their provisions;
- n) Failure, on the part of owners or legal administrators, regardless of the land's purpose or owner, to respect prevailing regulations and measures established by appropriate environmental authorities for the protection and preservation of natural habitat areas and biologic diversity, particularly for the protection of plants and animals which are natural monuments or are threatened with extinction;
- o) Failure, on the part of violators, to take the measures ordered by the environmental authorities to repair the damage caused to the environment by the violation.

Article 2

- (1) The violations stipulated in Article 1 are determined, and fines are imposed, by personnel empowered by the Ministry of Water, Forests, and Environmental Protection, by persons empowered by the Ministry of Health, by persons empowered by mayors and prefects, as well as by officers and non-commissioned officers of the Ministry of Interior, and by personnel from the Sanitary-Veterinary Police.
- (2) Appeals against violation notifications and fines can be made within 15 days after the date the violation is communicated.
- (3) The appeal, together with a copy of the violation notification and fine, is deposited with the unit to which the person issuing the notification belongs, which forwards it for resolution to the court within whose jurisdiction the violation was committed.
- (4) The provisions of Law No. 32/1968 on determining and penalizing violations apply to the violations specified in Article 1.

Prime Minister, Nicolae Vacaroiu

Countersigned by:

Minister of Water Resources, Forestry, and Environment, Aurel Constantin Ilie

This report contains information which is or may be copyrighted in a number of countries. Therefore, copying and/or further dissemination of the report is expressly prohibited without obtaining the permission of the copyright owner(s).

Minister of Domestic Affairs, Doru Ioan Taracila

Minister of Agriculture and Food, Ioan Oancea

Minister of Health, Iulian Mincu

Secretary of State, chief of the Department for Local
Public Administration, Octav Cozmanca

Bucharest, 30 March 1994 No. 127

SLOVAKIA

'Embarrassed' WWF Halts Campaign Against Gabčíkovo

AU1407140394 Prague CTK in English
1047 GMT 14 Jul 94

[Text] London, July 14 (CTK)—When Slovakia diverted the River Danube 20 months ago there was an international chorus of protest about its likely ecological impact, the British weekly NEW SCIENTIST writes today.

However, now embarrassed chiefs at the World Wildlife Fund (WWF), the organization that led the protest, are admitting that the project, at Gabčíkovo on the Hungarian border, may be good for the environment after all, the paper adds.

The organization's director-general, Claud Martin, has halted WWF's campaign against the diversion, after receiving detailed scientific refutation of the claim that the dam is causing an ecological catastrophe.

His European director, Magnus Sylven, last month apologized to Slovak scientists, saying "how embarrassed I personally feel about the WWF's past involvement" in the campaign against the dam.

The project seems to be having the opposite effect to that claimed by the WWF as recently as last month. It is reviving an almost dessicated wetland and recharging underground water supplies.

"We've not taken a firm position yet," Martin told the paper last week, adding that the WWF sent the 130-page report by Igor Mucha, a leading Slovak hydrologist, to specialists. Until they complete their analysis, we have no grounds to continue the campaign."

The Gabčíkovo dam, and an intended companion downstream at Nagymaros in Hungary, were planned jointly by Czechoslovak and Hungarian engineers in the 1970's. In Hungary, hostility to the dams at Gabčíkovo and Nagymaros grew in the 1980's and became the focus for opposition to the communist government.

The two countries have taken their dispute to the International Court of Justice in The Hague. Slovakia claims that Hungary acted illegally in reneging on the 1977 treaty binding the two countries to cooperation on the project.

Hungary says its action was justified by concern about the ecological impact of the scheme, and that Slovakia acted illegally when it diverted the Danube unilaterally. But recent changes in government in the two countries, and the failure of environmentalists' fears to materialize, may ease the way to a settlement of the dispute.

Minister Outlines Left Coalition's Ecological Objectives

AU1407151194 Bratislava SME in Slovak 13 Jul 94 p 3

["(rk)"]-signed report: "Five Green Left-Wing Interests"]

[Text] Bratislava—The real reasons for the establishment of the so-called genuine Social Democracy—which, intentionally or unintentionally, is playing into the hands of other political forces—are a lack of understanding for the principles and program of social democracy, personal interests, and the speculative considerations of a small group of former Social Democratic Party in Slovakia [SDSS] functionaries, says SDSS Chairman Jaroslav Volf in a statement issued to reporters at the press briefing held yesterday by the left-wing coalition. According to Environment Minister J. Hrasko (Party of the Democratic Left), the left-wing coalition has a common stance on ecological issues and he described its five areas of special interest as follows: drafting ecological legislation; resolving ecological indebtedness; ecological development in agriculture; setting quotas for permanently sustainable development; and raising ecological awareness. The minister expressed his regret about the intervention in Mochovce and said that he had requested an investigation into this incident. Green Party in Slovakia Chairman J. Pokorný—as opposed to Minister Hrasko—disagreed with the nuclear orientation of power generation and, compared with the Greenpeace organization, he emphasized that his party gives priority to a parliamentary means of pushing for alternative sources of energy.

**Nuclear Plant Conversion to Gas-Fired Plant
'Unreal'**

*AU1207192594 Prague CTK in English
1746 GMT 12 Jul 94*

[Text] Bratislava, July 12 (CTK)—The Mochovce nuclear plant must be completed because an energy shortage would give other countries the ability to influence Slovakia, Environment Minister Juraj Hrasko said today.

The government is taking steps to ensure the nuclear power plant's safety, Hrasko said at a press conference.

Though he is not a "fan" of nuclear energy, the minister said, he considers the idea of converting the unfinished plant to one powered by natural gas unreal because Russian supplies of the fuel are not certain.

"All talks on the problem of getting the gas to Slovakia through Ukraine have failed," Hrasko stressed.

The Green Party of Slovakia has set up a foundation to support the natural gas conversion of the Mochovce nuclear power plant. Jozef Pokorny, the group's

chairman, said it would like to hold a nationwide referendum on the plant's completion. If they fail, the money will be donated to a foundation for children's cancer treatment.

YUGOSLAVIA**Minister Says Yugoslavia Will Not Become
Nuclear Waste Dump**

*LD0607223994 Belgrade TANJUG in English
2002 GMT 6 Jul 94*

[Text] Sombor, July 6 (TANJUG)—Yugoslav Environment Minister Slobodanka Djordan said Wednesday Yugoslavia would never accept to become a dump for nuclear waste.

During her visit to Sombor, a city in north-eastern Serbia, Djordan said that the Federal Republic of Yugoslavia was also concerned when nuclear waste was disposed in neighbouring countries, such as Romania or Albania.

She said this was the reason why the Yugoslav Government had accepted the ministry's proposal to organize a meeting of all Balkan countries later this year to define a common programme of preserving the environment in the Balkans.

REGIONAL AFFAIRS

Southern Cone Environmental Issues

PY1107163794

Bolivia

Pando Department authorities have been unable to stop the irrational forest exploitation despite continuous charges by people living in regions affected by deforestation. Many sawmills, with the support of corrupt authorities, have set up camps and are irrationally cutting down trees. Pando Civic Committee President German Benquique Ojopi has charged that trunks are being sent to Peru and Brazil by river. Madre de Dios, Federico Roman, Abuna, and Manuripi Provinces are seriously affected by this illegal exploitation. (La Paz LA RAZON in Spanish 28 Jun 94 p A10)

Brazil

The Brazilian Institute for the Environment and Renewable Natural Resources and the Federal Police last week seized dead birds, including 20,000 arribacas and 138 espingardas, that were illegally hunted in Santa Cruz do Capibaribe, 192 km from Recife. They caught 172 hunters red-handed. The arribaca is a native pigeon of the northeastern part of Brazil. It is not in danger of extinction but indiscriminate hunting could reduce the number. (Sao Paulo AGENCIA ESTADO in Portuguese 2209 GMT 5 Jul 94)

Chile

Investigative Police units will conduct a special control program against any contamination of the environment throughout the country. The Chilean police have for a long time been concerned over the destruction of the environment. The Investigative Police have carried out special studies on forest fires, illegal exploitation of maritime resources, illegal exports of flora and fauna, and contamination of the environment, among others. There is a basic law on the environment, although it does not classify the ecological crime, a police officer said. The Investigative Police will eventually set up a specialized department, but it will first act as an advisory organization. Representatives from 15 countries are participating in an international seminar in Santiago on crimes against the environment. (Santiago Television Nacional de Chile Imagen Internacional in Spanish 1100 GMT 1 Jul 94)

Peru

Park Service General Manager Ricardo Cavenecia Lo Priore on 16 June reported that Defense Ministry personnel will guard the Pantanos de Villa swamps 24 hours a day to prevent the depredation that is constantly

threatening the area. He said this during the dedication of a modern meteorology station that will help the technical handling of the swamps ecosystem. (Lima EL COMERCIO in Spanish 17 Jun 94 p A8)

Arturo Woodman Pollit, president of the National Confederation of Private Business, Confiep, has stated that businessmen are very worried about the pollution of the Paracas Bay by the waste that fishmeal processing plants dump into the sea. He noted the need to adopt urgent measures to avoid more ecological damage to this natural reserve. Some weeks ago the mass media reported on the gradual reduction of marine species in the Paracas Bay because of the high contamination level. He reported that a special Confiep commission will be created to analyze the situation and suggest ways to coordinate the industrial development and the environment preservation. (Lima LA REPUBLICA in Spanish 28 Jun 94 p 2)

COLOMBIA

Company To Ship Toxic Waste Back to Croatia

PA0907044894 Santa Fe de Bogota EL TIEMPO
in Spanish 6 Jul 94 p 9A

[Text] Santa Marta—The Tradenet Co. of Colombia yesterday decided that 142 of the 575 drums of toxic waste currently in the Santa Maria Free Zone will be removed within six days.

Tradenet Manager Jorge Castellanos accepted a 30 June Environment and Health Ministries resolution that rejected an appeal [recurso de reposicion] after it was confirmed that the concentration of cadmium (a bluish metal used in alloys and that smelts at more than 300 degrees centigrade) surpasses legally permitted levels.

Tradenet instructed the Intercontainer firm, which operates in the free zone, to start the necessary procedures to ship back the toxic waste to its place of origin, Croatia.

The 32 tons of cargo that will leave the country comprise 30 percent of two containers whose main component was cadmium.

Castellanos pointed out that the ministries confirmed that 70 percent of the cargo is nontoxic and that it contains only remnants of decomposed tablets [pastillas] and paraformaldehyde, and therefore, he will file an appeal to show that there was no irregularity.

Tradenet has asked free zone authorities to coordinate efforts with the shipping agency Maritime Co. (Comar) to send the toxic waste to Cartagena and reexport it from there to the port of Rijeka, Croatia, which was its point of origin.

GUYANA

Commissioner Discusses Environmental Effects of Mining

*FL1007200694 Bridgetown Caribbean Broadcasting
Union Television in English 1430 GMT 7 Jul 94*

[From the "Caribscope" program; speakers identified by video captions]

[Text] Guyana is a country which has been richly blessed with natural resources. And the mining has been part of the Guyanese landscape for decades. But Shiv Nandalall [GTV (Guyanese TV) correspondent] tells us that the mining industry there is expanding: [begin recording]

Nandalall: With an area of 83,000 square miles and a population of less than 1 million people, Guyana's vast mineral reserves still remain to be fully exploited. The countless rivers and waterways run through the largely uninhabited interior, thousands of square miles of land rich in gold and precious stones. Mining in Guyana dates back to over a century ago, and a symbol in the early days was commonly known to many Guyanese as the (?volknocker). He was a figure who faced the rigors of the interior to work the gold and diamond fields. Today, mining is done with advanced to highly advanced technology. In recent years, increasing activity and the methods used in the mining industry have raised the question of a safe environment. The Guyana Geology and Mines Commission has since been taking steps to cope with the expanding industry. Commissioner of the Geology and Mines Commission, William Woolford, says that the bauxite mining poses the most serious threat to the environment.

Woolford: Well, after bauxite, I think we have to look at the sedimentation in the rivers caused by the hydraulic dredges, loosely called the missile jets, you know? That sedimentation is not a major problem at the moment, but certainly we want to keep minimizing it and that was the plan of the environmental management agreement that the Geology and Mines Commission pioneered because the hope is that we can have enough studies done so that we can limit the quantity of sediment going into the rivers. So even though we have had over the last four years studies being done in the Kuyuwini River, the Konawaruk River, the Patawa River, the Maduni River, and we got a feel for the levels, and we compared it with

other countries of the world. There are no alarm bells ringing, as far as we're concerned, but what we want to do is to make sure it doesn't get worse.

Nandalall: The vast environment is beyond the scope of the local authorities, and illegal mining occurs. In one operation, miners from neighboring Brazil were arrested by Guyanese security forces and their equipment seized. But of major concern are the methods of extraction of precious minerals and how they impact the environment. Gold extraction is done chemically, with the use of cyanide, by the giant mining firm (All-Mine) gold mines. Small miners use mercury, another substance with toxic properties. The environmentalists feel that the continuous use of mercury and the missile dredging operations can affect the food chain and, ultimately, humans. The Guyana Environmental Monitoring and Conservation Organization, GEMCO, has raised its concerns at various levels.

Dr. Josh Ramsammy, of GEMCO: Some of these impacts are physical—for example, the physical disturbance of the landscape, the destruction of the landscape—and some of it is chemical, particularly, in this case, in the case of mining activities which make use of mercury to amalgamate the gold particles. In the case of dredge mining, where mercury is used extensively, there is the serious threat of chemical pollution by mercury, which is one of the most dangerous heavy metal poisons known.

Nandalall: The environmental group is also proposing what steps should be taken to ensure that mining occurs in harmony with the environment.

Ramsammy: Firstly, we feel that the policies and procedures should be clearly defined with a view to protecting the environment, procedures for allocation of areas and the award of concessions for mining. We feel there should be some regulation at that level. Secondly, there should be realistic environmental legislation. Government, I know at the moment, is looking at legislation for the protection of the environment. But these regulations have to be informed by regular and independent monitoring. We stress independent because we want the results to be credible or to be seen as credible.

Nandalall: Mining is a valuable source of revenue for the government coffers. It is unthinkable to scrap the industry but necessary to keep the environment free as much as possible from pollution. [end recording]

BANGLADESH

Commentary Favors Speedy Resolution of Ganges Water Problem

BK1407160794 Dhaka Radio Bangladesh Network
in Bengali 1430 GMT 13 Jul 94

[Station Commentary]

[Text] Indian Finance Minister Manmohan Singh called on Prime Minister Khaleda Ziaur Rahman in Dhaka yesterday. During this meeting, the prime minister apprised him about the adverse effects of the withdrawal of the waters of the Ganges River at Farakka by India on the agriculture, economy, and environment of Bangladesh. She said that it has become necessary in the interest of the people of Bangladesh to immediately resolve the Farakka problem. The Ganges is an international river. Bangladesh is eagerly awaiting the proof of the good intentions of India to get an equitable share of the waters of this river. The prime minister expressed the hope that India will realize the importance of finding a just solution to the Ganges River water problem. She called for speedy resolution of all outstanding bilateral problems between Bangladesh and India including the Ganges water sharing issue. The prime minister added that this would help boost cooperation between the two countries in various fields including trade, economy, and investment.

The greatest obstacle on the path of bilateral relationship between Bangladesh and India is the problem relating to the sharing of the waters of the Ganges River. This is not a political problem but a humanitarian problem. This problem has created endless hardships for a large number of people. It has posed a threat to the life and livelihood of about one-third of the total population of this country. Bangladesh is facing water scarcity during the dry season, as India has constructed a dam on the Ganges River at Farakka in the state of West Bengal and also due to the diversion of the normal flow of the Ganges River water by India. On the Bangladesh side, the Ganges and the Padma Rivers are becoming dry and are fast being converted into sandy beds devoid of any water. The Padma River and its tributaries are drying up and have become unnavigable. This has also led to the destruction of fish resources in vast tracts of land located on the banks of the Padma River and has also posed a threat to agriculture. The process of desertification has started in large tracts of land adjoining the Padma River, and the environment is also quickly deteriorating. Life for about 40 million people living on the banks of the Padma River and its adjoining areas has become miserable. From the very beginning of this problem, Bangladesh has been demanding a fair share of the Ganges River water. Since independence, innumerable meetings and detailed discussions have been held in this regard between the officials and the leaders of the two countries, but so far no solution has been found to this problem. The flow of water in the Padma River has not increased but instead is gradually decreasing.

This problem has become a major irritant in the bilateral relations between Bangladesh and India. It has discouraged good-neighborly relations, friendship, and cooperation between the two countries. This is not desirable. It is necessary that the neighboring countries peacefully resolve their outstanding problems with a view to ensuring peace, prosperity, and stability in this region. This is not an impossible task. There is no problem that cannot be resolved peacefully. It is possible to resolve all problems through peaceful dialogue. The only thing that is necessary is the good intentions of the concerned countries.

Bangladesh believes in forging close friendship and establishing a relationship of cooperation with its neighboring countries. It was this belief that once led Bangladesh to dream of forming the South Asian Association for Regional Cooperation [SAARC]. SAARC was launched due to the good intentions and initiatives taken by Bangladesh and the other South Asian countries. This organization has gone a long way in strengthening regional cooperation. Though bilateral problems cannot be discussed in the SAARC forum, they can be resolved in the SAARC spirit. The SAARC forum will become more dynamic and prosperous if the countries of South Asia take initiatives in the interest of the region to peacefully resolve their bilateral problems.

INDIA

Kerala Coastal Waters Country's Most Polluted

94WN0345A Calcutta THE STATESMAN in English
13 Jun 94 p 12

[Text] Bangalore, June 12.—Kerala coast has been found the most polluted area along the Indian coastal waters by the Coastal Ocean Monitoring and Prediction System (COMPAS) of the Department of Ocean Development (DoD), reports PTI [Press Trust of India].

Alarming levels of poisonous cadmium and lead were observed in the sediments collected from the mouth of Kochi backwaters and it was found that the concentration of these metals has been gradually increasing during the last few years, says a report from DoD.

High-level of heavy metal concentration was also observed in the sediments collected from the coasts of Subarnarekha in West Bengal and Kayamakulam and Kollam in Kerala.

COMPAS is a DoD programme to monitor the level of the various marine pollutants in the coastal and offshore waters of the country and to assess the health of Indian seas, launched in 1989 and being done with the help of various related organisations.

After collecting data from 77 locations on 25 parameters with the help of 10 institutions, intensive monitoring of pollutants in 25 "hot-spots" was being done for two to three seasons a year, the report said.

The data collected from 1987 to 1993 along the coast of Mangalore by the National Institute of Oceanography (NIO) revealed that despite various activities leading to pollution, water quality of the area remained fairly clean, though, oxygen level was less in the area due to discharge of untreated domestic sewage, the report said.

Similar alarming trends of low oxygen level was also noticed on the waters of Gujarat coast which was also characterized by comparatively higher levels of ammonia and petroleum hydrocarbons.

In Maharashtra coast, an improvement in the dissolved oxygen level was observed in 1993 compared to the previous year. However, the levels of toxic metals such as cadmium and mercury were running high as in the previous years, the report added.

High levels of ammonia and phosphate were reported from the Kochi backwaters and the adjacent near shore waters, irrespective of the fact that this has complicated the situation together with the low levels of oxygen, the productivity level of the estuary has been on a higher side due to the riverine effect.

High amount of suspended solid particles was observed near the waters of Madras harbour, which, the report said, could be due to spillage of coal dust during loading and unloading operations. Besides this, alarming value of biological oxygen demand (BOD) was observed in the mouth of Cooum river indicating high organic load resulting from disposal of untreated domestic wastes.

An interesting feature in the Tamil Nadu coast was that low levels of nitrate and phosphate were observed indicating high rate of consumption of these nutrients in the area.

Rao's Steps To Improve Environment Reviewed

94WN0344A Bombay THE TIMES OF INDIA
in English 22 Jun 94 p 12

[Text] New Delhi, June 21 (UNI [United News of India]).

Protection of environment was one of the thrust areas pursued by the Prime Minister, P.V. Narasimha Rao, during his first three years in office.

A detailed analysis of the steps taken by the Rao regime during the period showed that the government had taken a series of eco-friendly measures, including the supply of the lead-free petrol in metro centres from April next year and efforts to phase out the ODS (Ozone Depleting Substances).

Official sources said the last three years were momentous for the environment, the subject having occupied the centre stage ever since the Rio summit preparations started and India played a significant role in safeguarding the environment by clamping several restrictions despite resource constraints.

The environment and forest ministry, the sources said, played a crucial role in coordinating several activities, at the international level, related to the conventions on bio-diversity.

India not only embarked upon new schemes and plans within the country, but also coordinated with other countries in making the environment protection a relentless movement, the sources said and highlighted the country's role in the framing of the U.N.-commission on sustainable development and global environment facility (GEF).

The sources said the Rs 6500 crore programme to phase out the ODS had been approved under the Montreal protocol. The entire cost, which was likely to go up further, was to be met out of the multilateral fund created under the protocol.

The fund had already approved nine projects at a cost of \$2.6 million. Another seven projects costing \$ million would be considered by the executive committee of the fund at its next meeting. In 1992, India was elected chairman of the bureau of parties to the Montreal protocol, the sources said.

At the national level, the national conservation strategy and policy statement on abatement of pollution had been announced providing the basis for integration of environmental considerations in the policies and programmes of different assessment (EIA). Notification had been issued to make it mandatory for 29 categories of industries and projects to seek environmental clearance before expansion, modernisation or undertaking new projects, the sources added.

As regards the industrial pollution, the ministry launched a drive during the last two years setting deadlines for 17 categories of grossly polluting industries in the large medium sector.

Out of the 1551 such identified units only 48 failed to install the requisite pollution control facilities up to the deadline of December 31, last year. Besides, 77 such units had since closed, and action was being initiated against the delinquent units, the sources said.

The public liability insurance act, passed by parliament, imposed on the owner the liability to provide immediate relief in respect of death or injury to any person or damage to any property resulting from an accident while handling hazardous chemicals. The owner had to take insurance policy compulsorily.

An environment relief fund had been created out of the premiums. More than 2,000 policies had been issued under the act and more than Rs 7.5 crores deposited in the fund. Six accident cases had been reported so far and Rs 16,000 given as immediate relief, sources added.

The sources said a gazette notification has been issued by the ministry, making it compulsory for every person, carrying on an industry or operation to submit an

This report contains information which is or may be copyrighted in a number of countries. Therefore, copying and/or further dissemination of the report is expressly prohibited without obtaining the permission of the copyright owner(s).

environmental statement to the concerned state Pollution Control Board, every year.

"In this statement every industry is to provide information on water and raw material consumption, solid wastes and the disposal practices," the sources added.

The industries were also required to specify the impact of pollution control measures on conservation of natural resources. Besides the Central Pollution Control Board had also completed environmental audit of 56 units in 17 heavily polluting industrial sectors and 90 more units had been identified for such studies during the year. A bill was introduced in parliament for setting up environment tribunals to expedite cases arising out of environmental accidents.

The sources said the use of pentachlorophenol (PCP) and its derivatives was banned for being highly toxic and having a tendency of bio-accumulation. Its use in leather tanning was also affecting the export of Indian leather goods as EEC countries had banned the use of PCP in leather products, the sources added.

Considering the rising trends in the deterioration of ambient air quality in the metropolitan cities due to the phenomenal rise in vehicular population, which accounted for about two-thirds of the pollution load in urban areas, the ministry of environment and forests notified new emission standards for vehicles.

"The first stage of standards is for adoption by April 1996. These are 60 per cent more stringent than the present ones. The standards for the second stage to be enforced from April 1988 are 80 per cent more stringent. For diesel vehicles, there is only one stage that is April 1996". The lead content in petrol was proposed to be totally eliminated by the end of the century, the sources said.

The sources said a Rs 155 million dollar industrial pollution control project was launched with World Bank aid and phase two had been approved at a cost of \$330 million.

"Financial assistance is provided to install pollution control equipment for large-scale industries. Government subsidy and soft-loan is also available for setting up common effluent treatment plants in clusters of small scale units".

Financial incentives were being provided for installation of pollution control equipment and for shifting polluting units from congested areas.

A network of ambient air and water quality monitoring stations had been set up and standards for air and water quality notified. As many as 22 polluted areas all over the country had been identified and environment management plans prepared for control of pollution and improvement of environments in these areas.

The sources said the Forest Survey of India report, 1993, based on the satellite imagery, had shown that the forest

cover in the country had increased from 6,39,182 sq km in 1991 to 6,40,107 sq km in 1993.

The afforestation effort was stepped up considerably during the last three years. More than 30 lakh hectares were afforested during these years which was much more than the area covered in earlier decades. Besides, 376 crore seedlings were distributed for plantation on private lands.

Several afforestation projects were launched with assistance from international institutions like the World Bank and under bilateral/multilateral arrangements.

Environment Impact Notification Provisions Modified

BK0707122994 Delhi INDIAN EXPRESS
in English 3 Jul 94 p 7

[Report by Sandeep Unnithan]

[Text] Bombay—The powerful lobby of industrialists, bureaucrats and politicians in order to dilute the provisions of the Environment Impact Notification and seek people's participation in environmental clearance to industrial projects, (as stated in INDIAN EXPRESS of March 14, 1994,) had its way finally.

Minister for Environment and Forests Kamal Nath has, skilfully modified the notification of January 1994 on May 4, within 5 months of passing the notification. The amendment comes into effect almost immediately, without any public notice.

Crucial words like "detailed project report" have been amended to read simply as "project report". The requirement for the submission of a comprehensive report is left to the discretion of the Impact Assessment Agency.

The new amendment has successfully eliminated mandatory provision for consultation of the expert committee according to the January text which read, "The summary feasibility report shall be evaluated and assessed by the Impact Assessment Agency at the Central Government in consultation with a committee of experts having a composition as specified."

The amendment in the May text reduces the government's mandatory consultation of the committee of experts to an "only if necessary".

The words "summary feasibility" and "detailed environment management plans" too have been dropped altogether in the amended section.

The amendment further nullifies the participation of environmental groups in the Environment Impact Assessment (EIA) process by holding only residents around the project site eligible to participate in the EIA.

NGO's [nongovernmental organizations] who earlier had an access to feasibility reports submitted by the assessment agency now can have access to the reports on

request, "if deemed necessary in the public interest." This vague "public interest" phrase has successfully vested with the Government, powers to deny information to the affected people.

The amendment goes on to state that public hearings can be called for only in cases of projects involving larger displacement or having severe environmental ramifications.

Public hearings could be called for in cases involving "large displacement" (including more than 1000 people) or having "severe environmental ramifications".

The comprehensive rehabilitation plan is again applicable only in the case of this large displacement, otherwise a summary plan would be adequate.

An explanatory note on the project application form allows the proponent to delay in providing information to the Impact Assessment Agency (IAA) by merely not giving any information that could deter the Government from permitting the project.

This renders the very exercise of an environment assessment futile.

An entire clause requiring the Government to give a notice of its intention to impose restrictions on the location of an industry, has been rendered redundant.

The update states that the Government could in "public interest" dispense with the requirement for a notice.

"The amendments as innocuous they may seem will have devastating effects," says Kerban Anklesaria, lawyer and environmentalist from the Indian People's Tribunal.

"In western countries there are voluminous procedural acts laying down environment aspects. In this country all we have is a five-page notification which is being constantly watered down and diluted by industrial interests," she said.

"Under this amendment, Government will give you a hearing only when you go around wearing gas masks," remarked Anklesaria.

"The Government is allowing the violation of fundamental rights and giving the violators protection of these laws," she concluded.

Yamuna Plan Approved, Body Set Up To Tackle Pollution

94WN0334A Calcutta THE STATESMAN
in English 4 Jun 94 p 6

[Text] New Delhi, June 3.—The schedule for the Rs 436-crore Yamuna Action Plan was approved by the Prime Minister Mr. P.V. Narasimha Rao, today.

(A unified River Conservation Directorate has been created to tackle pollution, in all the major rivers of the country, adds PTI [Press Trust of India]).

Mr. Rao, who was presiding over the eighth meeting of the Central Ganga Authority—a policy level body to review and monitor the progress of the Ganga Cleaning Programme—also asked the Ministry to prioritize other work, pertaining to the other rivers, under the National River Action Plan.

It was decided at the meeting that with the implementation of the National River Action Plan, the Ganga Project Directorate would be renamed the National River Project Directorate.

The Minister for Environment and Forests, Mr. Kamal Nath, submitted the figures his Ministry had compiled, after conducting a survey of the progress of the Ganga Action Plan.

He informed the meeting that 230 of the 261 schemes, envisaged under the first phase of the Ganga Action Plan, had been implemented. He said the remaining would be completed before 1995-96.

Mr. Kamal Nath said that with the implementation of the Ganga Action Plan, the quality of water had improved significantly in most places except Kanpur, where the sewage treatment plants were yet to be operated.

The meeting was attended by the Chief Ministers of Uttar Pradesh, West Bengal, Haryana, and Delhi.

Among the others who attended the meeting were the Finance Minister, Dr. Manmohan Singh, the Minister of State for Planning and Programme Implementation, Mr. Giridhar Gomango, and the Minister of State for Science and Technology, Mr. Bhuvanesh Chaturvedi.

Agency adds: The meeting, however, shelved a decision on the proposed national lake conservation plan.

The authority decided to further examine the Ministry's proposal for the national lake conservation plan for which 21 urban lakes in nine States have been identified.

The concerned States have agreed to explore the possibilities of raising additional resources within the local bodies to ensure proper operation and maintenance of the schemes under the Different River Action Plan.

Mr. Rao, who is the Chairman of the authority, stressed the need for treating the major drains. He described them as the major source of pollution in non-perennial rivers.

Underscoring the need for an independent evaluation of the Ganga Plan (Phase-I), Mr. Rao said appropriate mechanisms should be created to ensure proper and sustained operation of these assets.

Mr. Rao also emphasized the role of individuals and institutions such as panchayats for maintaining the quality of the river water.

Saying that the assets generated under the Ganga Action Plan could not be fully utilized, for want of electricity to

This report contains information which is or may be copyrighted in a number of countries. Therefore, copying and/or further dissemination of the report is expressly prohibited without obtaining the permission of the copyright owner(s).

run them, the Minister urged the States to arrange for a dedicated power supply for treatment of the facilities.

Mr. Kamal Nath urged Mr. Rao to treat external assistance as additional to the plan outlay.

Minister on Possible Renewable Energy Agreement With U.S.

*BK1107130594 Madras BUSINESS LINE
in English 8 Jul 94 p 9*

[Text] New Delhi, July 7—India and the U.S. are likely to sign an agreement on cooperation in renewable energy during the visit of the U.S. Energy Secretary, Ms. Hazel R. O'Leary, beginning on Friday [8 July], according to Mr. S. Krishna Kumar, Minister of State for Non-Conventional Energy Sources.

Mr. Kumar told newsmen here on Thursday that India would benefit immensely from such an agreement as the US had the latest technology in the field.

However, some Ministry officials expressed a note of caution on the signing of the pact. The agreement would come about only if the differences between the two countries on the intellectual property rights (IPR) issue was settled, they said.

But as the chances of the issue being settled soon appeared remote, they felt the agreement on renewable energy may be kept on hold for the time being.

Mr. Kumar said there were a number of Indo-U.S. projects on renewable energy in the pipeline. Sea Solar Power Incorporated of the U.S. was promoting the use of ocean thermal energy conversion technology and the first such 100 MW [megawatt] plant was proposed to be set up off the Tamil Nadu coast at a cost of Rs. [rupees] 750 crores. The entire finance would be brought in by the U.S. firm.

While Sea Solar had signed a memorandum of understanding with the Tamil Nadu authorities in January this year, he said further discussions on the implementation of the project were likely to be held with Ms. O'Leary.

Nonconventional Energy Sector Advances to Operational Stage

*BK1107014594 Delhi THE HINDUSTAN TIMES
in English 8 Jul 94 p 9*

[Text] New Delhi, July 7—India's non-conventional energy sector has moved from the research and development stage to commercial operations and the country is set to emerge as the leading centre for latest technology in the field.

This was stated by Minister of State for Non-Conventional Energy Sources S. Krishna Kumar while addressing a Press conference today. He said the sector received a significant boost during the three years of Prime Minister P. V. Narasimha Rao's Government as it

was felt that non-conventional sources of energy could not only solve the energy supply problem but were also environment friendly.

The Ministry was the only one to revise its Eighth Plan target and aimed at 2000 MW of power instead of the 600 MW envisaged earlier for the Plan. Ninety per cent of such power was likely to be produced by private entrepreneurs who were being attracted to the field through various incentives including remunerative prices.

In the area of wind energy, the country had an installed capacity of 114 MW. Another 800 MW had been planned and it was estimated that in another year or two, the country would be second in wind power generation after the United States.

Mr Kumar said the total potential for wind energy in the country was estimated to be 20,000 MW. A National Wind Energy Survey was on to locate suitable sites. As many as 69 of these were already identified in the States of Tamil Nadu, Andhra Pradesh, Gujarat, Karnataka, Kerala, Madhya Pradesh, Maharashtra and Lakshadweep. These sites were expected to generate 3000 MW.

Asia's largest wind arm of 2S MW was located at Lamba in Gujarat. India was already producing its own wind power turbines, he said. The Madhya Pradesh Government had taken the decision to set up a joint sector company for establishing a wind energy estate for turnkey installations and operation of wind turbines for small investors.

In the area of small hydro power development, the Non-Conventional Energy Source Ministry's jurisdiction had been raised from 3 MW to 15 MW. The country's potential was estimated to be 10,000 MW.

As many as 2000 potential sites with a capacity of 5000 MW were already identified in UP, Arunachal Pradesh, Orissa, Andhra Pradesh, Kerala, MP, Himachal Pradesh and Punjab and the target of 600 MW in the Eighth Plan was expected to cover almost 1000 sites. For remote and hilly areas, an innovative scheme of providing 50 portable micro-hyde sets upto 15 KW capacity each for local communities had been launched.

Bagasse based co-generation was a new programme. Each sugar mill was capable of producing five to 10 MW of power. The Eighth Plan target was 300 MW and the scheme was likely to be supported through equity and loans.

There was tremendous progress in the solar energy sector. Solar photovoltaic systems were being used on a commercial basis for pumps and lighting in rural areas railway signalling, rural telephones microwave repeater stations and TV transmissions. A 30 MW solar thermal power generation project of BHEL was nearing completion in Jodhpur. Solar water heating was being made mandatory in Government functional buildings, first, and then in private buildings.

PAKISTAN

'Lack of Coordination' Seen Hampering Environmental Laws*BK1907133794 Karachi DAWN in English 8 Jul 94 p 6*

[Article by Mohammad Ilyas]

[Text] Islamabad, July 7—Lack of coordination between different major organs of the state has perplexed the environment-conscious circles in the federal capital.

On the one hand, the 1994-95 plan shows an allocation 140 per cent higher than last year, and on the other, the tax burden on antipollution equipment has been increased by over 3 to 18 per cent under the revised tariff structure.

As a manifestation of the government's commitment to the protection of environment, as envisaged in the National Conservation Strategy, a reduced duty of 10 per cent ad valorem was imposed by an SRO [expansion unknown] of May 7, 1992, on "Anti-pollution equipment including devices for checking and abatement of noise and equipment for preventing industrial disasters of occupational diseases and components thereof for local manufacture" provided these were imported by government agencies, the Local Bodies or industrial undertakings.

As in the case of numerous other items, the ad valorem duty on antipollution equipment too has been adjusted upward to 25 per cent after merger of 10 per cent ad valorem plus 12 per cent para-tariffs. In addition, 15 per cent General Sales Tax has been imposed on many of the items included in the impugned SRO. However, the duty is zero in case these equipments are imported for the petroleum sector.

Some of the components carry higher duty rates because these are used in equipment other than specified in the SRO. Items which are required for use in pollution abatement would, however, be exempted from duty in excess of 25 per cent, CBR [expansion unknown] authorities explained.

The decision could not have come at a worse time as the National Environmental Quality Standards relating to new industries—that is those units that will come into production on or after June 30, 1994—have come into effect from the current financial year.

These standards, moreover, require the existing industries to bring about necessary changes by June 30, 1996.

An elaborate, complex set of arrangements is considered vital for making these standards enforceable. In this regard, the Environment Impact Assessment (EIA) is now legally in place. Every government project has to be referred to the Federal Environment Protection Agency [EPA]. From July 1, the private sector also has to submit its projects to EPA for assessment.

However, to make the industry environment-friendly, it is vitally important that the impediments that it faces be anticipated and measures adopted to facilitate its acquisition of technology, that is in line with the avoidance of pollution and conservation of natural resources. The reduced duty was indeed a significant step in that direction.

In the course of roundtable hearings organised by EPA in collaboration with some NGOs [nongovernmental organizations] including Sangi, PILER [expansion unknown] and IUCN [World Conservation Union], the representatives of industry pointed out that installation of equipment and processes conducive to environment conservation required capital which should be available at reduced mark-up.

For monitoring and enforcement of pollution of air, water and noise, Central Laboratory for Environmental Analysis has been established at EPA in Islamabad, at a cost of approximately Rs [rupees] 15 million.

An important programme is now in hand for strengthening of the Ministry of Environmental and Urban Affairs and for institution building spanning six years, for which the World Bank has provided Rs 100 million. It includes 13 umbrella projects, the most important part of which is training of personnel.

As against Rs 56 million worth of projects included in the ADP [Annual Development Program] of 1993-94, the allocation this year is about Rs 138.6 million including foreign exchange component of Rs 78.4 million which includes funds for on-going eight projects. About a dozen are new projects.

All said and done, nonetheless there still exist numerous lacunae in the environmental set-up of the country. And for that the meeting of the Environmental Protection Council is over-due.

This apex body was created under the Pakistan Environmental Protection Ordinance, 1983. An EPA was also instituted under the Ordinance in 1984. It, however, remained almost moribund as it took the Council 10 long years to hold its first meeting. Mr Anwar Saifullah, former Minister for Environment, who had led the Pakistan delegation to Earth Summit held in 1991 in Brazil, laid the ground for animating the Council and prevailing over the caretaker Prime Minister, Sardar Sherbaz Khan Mazari to convene it in April 1993.

Thanks to that meeting, EPA was able to notify the Environmental Quality Standards last August.

Section 3 (4) of the Ordinance says: "The Council shall hold meetings as and when necessary: Provided that no less than two meetings shall be held in a year." The year 1994 is in its seventh month and a summary has been sent to the Prime Minister, its Chairman, for a meeting to discuss an accumulated agenda.

This report contains information which is or may be copyrighted in a number of countries. Therefore, copying and/or further dissemination of the report is expressly prohibited without obtaining the permission of the copyright owner(s).

An important item of the agenda, it was reliably learnt, is the draft of an Environment Protection Act which aims at, inter alia:

- giving legal cover to and strengthening provincial EPAs;
- authorising any person legitimated by EPA to enter any premises for obtaining samples for the purposes of analysis;
- enforcing the Polluter Pays Principle through a system of industrial discharge licensing;

- enforcing regulations for different kinds of wastes as visualised in the Basle Convention to which Pakistan is a signatory;

- Determining projects for which EIA would be compulsory and others requiring environment impact examination.

- Providing powers to regulate/disallow specific activities.

Another important issue awaiting decision by the Council is whether there should be courts or tribunals to adjudicate matters relating to environmental matters. IUCN has proposed the establishment of tribunals.

REGIONAL AFFAIRS

Environmental Protection Accord Signed With Belarus

1.D0607225994 Moscow Radio Rossii Network in Russian 1700 GMT 6 Jul 94

[Excerpts] An agreement on environment protection between Russia and Belarus has been signed in Smolensk. Our correspondent Vladimir Vengrzhnovskiy reports.

Correspondent Vengrzhnovskiy: [Passage omitted] In order to join efforts aimed at ecological improvement of the environment an international agreement was signed in Smolensk. It outlines Russia's and Belarus' duties linked to joint use of water in the basin of rivers they share—Dnepr, Western Dvina, and Sozh—and contains a number of other requirements for improving the ecological situation on the territories of both sides. The agreement is also a legal basis for the joint interstate use of our countries' natural resources.

Signing the agreement on mutually beneficial cooperation, Viktor Danilov-Danilyan, Russian minister of ecology and natural resources, and Anatol Darafeyew, his Belarus counterpart, stressed that the document is the first major bilateral agreement between Russia and Belarus. [passage omitted]

Agreement Signed With Belarus on Environmental Issues

MM1307140594 Moscow SELSKAYA ZHIZN in Russian 12 Jul 94 p 1

[Report by Arkadiy Glazkov: "One World"]

[Text] An agreement has been signed in Smolensk between the governments of Russia and Belorussia [Belarus] on environmental protection. The document stipulates the state's duties in respect of the joint use of water in the basins of the common Dnepr and Western Dvina rivers and also includes demands on improving the ecological situation on the territory of both republics.

RUSSIA

Moscow Mayor Reports on Ecological Situation

944F0920A Moscow IZVESTIYA in Russian 7 Jul 94 p 2

[Article by Viktor Belikov, IZVESTIYA: "Moscow's Government Is Alarmed Over the City's Ecology, and It Decided To Reorganize the Tax Service"]

[Text] "The result of the activity is zero," Moscow Government Prime Minister Yuriy Luzhkov was compelled to assert twice, at first summing up the results of the work of the Moskompriroda [Moscow Environmental Protection Committee] and afterwards of the results of the work of the price and tax policy administration.

It was said about the "habitation environment" of the residents of the Moscow region: Almost 10 percent of the population of the country lives permanently in an area three-tenths of a percent of the territory of Russia. The overload is colossal! This has led to the fact, for example, that more than a third of the city's green plantations have already degraded, and almost one-third of the area of Moscow is occupied by industrial buildings or warehouses up to the present time. Individual garages "have eaten up" more than 3,500 hectares of the land of the capital, not to mention their pollution with spilled gas, oil, and water with synthetic cleaning substances.

Incidentally, as inspections show, every fourth motor vehicle moving in the city has a defective or unregulated fuel system, as a result of which their exhausts contain an impermissible amount of harmful substances and give four-fifths of all of the pollution of Moscow's air space. A more comforting picture is presented by the powerful TETs [thermal electric power center] and the rayon thermal stations, which were converted in a timely way to gas and which are now equipped with effective native systems of scrubbing exhaust gases, as is being done, for example, at the well-known Northern TETs. Converted enterprises of the "defense industry" are eagerly working on the output of the necessary scrubbing apparatuses, declared Yu. Luzhkov, on whom the title of academician of the Russian Ecological Academy was conferred recently.

At his proposal, the final edition of a comprehensive ecological program of Moscow, which will be examined again by the government within a month, establishes clear and not-too-distant dates for specific environmental protection measures. In particular, in the next two or three years, new nontoxic sorts of motor fuel for the auto transport of Moscow are supposed to be developed on a competitive basis. The bus pools are being redesigned to work on gas. The building of a third transportation ring, which was stopped four years ago, will be continued energetically. This will disperse traffic congestion, and it will lower the level of gas pollution in the center of the capital.

It is proposed in the near term to develop legal documents that prevent the arbitrary construction of dachas, garages, cottages, and industries in the forest shelter belt around Moscow and its water-protection zone. By 1997—the 850th anniversary of the founding of the city—two to three large tracts of wooded parks should appear in it. In addition to the operating garbage incineration plant, another three similar enterprises and five garbage compacting stations should appear in four years.

"We should see to it," emphasized the mayor of the capital, "that any ecological harm caused the city should redound to the guilty party with such financial damage that he would be threatened with ruin and bankruptcy. An example of this kind of economic effect will be the decree of the city government being prepared on

This report contains information which is or may be copyrighted in a number of countries. Therefore, copying and/or further dissemination of the report is expressly prohibited without obtaining the permission of the copyright owner(s).

increasing the payments for leasing land and a tax on property located in water reservoir areas, nature parks, and preserves."

This concluding comment in a discussion by the prime minister of the question seems to have built a bridge to an impartial discussion of the situation that set in during the year's existence of the Price and Tax Policy Administration. It was noted that this service literally "stopped" in August of last year, when it was formed. It proved to be incapable of tracking the quickly changing situation in the developing market economy of the city, and it passively traces the reshuffling of prices, turning into something like the Moscow trade statistics office.

For example, not one real recommendation or substantial analysis came from it regarding the vicious system of "inflation" of costs of goods and services through middlemen. Even to the direct question of one member of the government—"Are you for free or regulated prices?"—a distinct answer did not come from the deputy director of the administration standing on the rostrum. Now, as the government of the city decided, it is necessary in a 10-day period to fully reorganize this subdivision with compulsory personnel changes, which First Deputy Prime Minister K. Buravlev was instructed to do.

Nuclear Fuel Recycling Plant Construction Delay Scored

94WN0342A Moscow NEZAVISIMAYA GAZETA
in Russian 7 Jul 94 p 1

[Article by Andrey Vaganov under rubric "Problem": "Do We Need a Complex for Recycling Radioactive Wastes?: Nuclear Directors Sound the Alarm"]

[Text] NEZAVISIMAYA GAZETA has learned that the general directors of three of Russia's largest nuclear fuel cycle enterprises—A. Karelin (NPO Radiyevy institut imeni V. G. Khlopin), V. Kurnosov (All-Russian Scientific Research and Planning Institute of Energy Technology) and V. Lebedev (Krasnoyarsk Mining and Chemical Combine)—sent a letter to the Russian Federation government in which they expressed an extreme degree of concern over the fate of construction of the world's largest plant for recycling spent nuclear fuel of atomic power stations.

Despite the presence of foremost technological developments in the area of handling radioactive waste, Russia still does not have a modern storage facility, and waste is being stored right on the grounds of the atomic electric power stations. The bulk of it is in the form of liquid concentrates in stainless steel containers. The industrial complex for recycling radioactive waste, under construction since 1987 (as part of the Krasnoyarsk GOK [Mining and Concentration Combine]), was supposed to solve the bulk of these problems. In the opinion of the three general directors, however, creation of the industrial complex is being disrupted as a result of bureaucratic actions by officials at various levels.

"What is the problem? There is no problem; there is the desire of incompetent bureaucrats and highly placed politicians dying for power not to start up' and to earn the capital of environmentalists," they point out in their letter.

Strange as it may seem, the directors are by no means asking for budget funds for creating the enterprise, evidently understanding the lack of prospects for such demands. They propose another solution in the given economic situation: "We ask one thing—give us the right to conclude contracts with countries of the near and far abroad for recycling spent fuel of atomic power stations, to complete construction of the industrial complex over five-seven years from the profit which has formed, and to put it into permanent operation." In the assessments of experts, beginning in 1995 \$100 million could come into the Russian Federation budget each year from the profit received. Krasnoyarsk Kray would take a minimum of 160 million into its treasury. By the way, local organs in the person of the heads of the Krasnoyarsk Kray administration coordinated and signed a contract with the Mining and Chemical Combine (Contract No 1 of 23 February 1994) for accepting spent fuel of foreign atomic electric power stations for recycling.

But opponents of this project refer to the fact that under the Russian Federation Law "On Environmental Protection," "the import of radioactive waste and materials from other states for purposes of storage or burial, and the submersion of radioactive waste and materials or their shipment for burial in outer space are prohibited."

The people responsible for creating the industrial complex for recycling radioactive waste now have to prove in the State Duma, already for the second time (the first time still as former heads of the Russian Federation Armed Forces), that they propose to import spent fuel not for storage or burial, but "for recycling on mutually advantageous terms with the return of recycled products and consolidated, highly active wastes to the country which supplied the spent fuel for recycling. That is how they work throughout the world, earn enormous profits and live perfectly well."

The domestic project largely surpasses similar projects of plants in England and France for the level of technological and hardware solutions in questions of purifying gaseous and liquid discharges and handling radioactive waste.

But while the directors haunt the thresholds of state establishments, the degree to which liquid radioactive waste storage facilities at Russian atomic electric power stations are being filled is close to or already has topped the critical mark: from 42 percent at the Kurskaya Atomic Electric Power Station to 98.1 percent at the Leningradskaya Atomic Electric Power Station. It is the very same with solid radioactive waste: 12.5 percent at the Kalininskaya and 84 percent at the Kurskaya Atomic Electric Power Station.

Work Continues on Sealing Nuclear Sub Komsomolets' Bow

LD1507200994 Moscow INTERFAX in English
1611 GMT 15 Jul 94

[Text] Bathyscaphes Mir-1 and Mir-2 sent by the Russian Ministry on Emergency Situations to the area in the sea of Norway where the nuclear submarine Komsomolets capsized at the depth of 1700 meters in April of 1989, has done the better half of their work. They were sent to the area to seal the submarine's bow.

Back in 1989 the Komsomolets carried two torpedoes with nuclear warheads. The torpedo launchers are placed in the bow and now threaten to pollute the sea with weapon-grade plutonium.

The Ministry on Emergency Situations told Interfax that titanium plugs had been installed in six of the bow's nine openings. In particular, the openings for five torpedo launchers and an opening between the upper and lower rows of the launchers had been sealed against possible leaks.

The results of soil and water analyses are to help experts come to conclusions on the condition of the submarine's reactor and nuclear ammunition.

A quick on-the-spot analysis already completed allows the Ministry to describe the area's radiation level as within the norm.

According to Ministry spokesmen, the expedition is working under complicated weather conditions. Water and air alike are at temperatures of 4 to 5 degrees Centigrade, and the sea has waves with a rating of 3 to 4. For safety reasons the two bathyscaphes submerge simultaneously. Work at the submarine site will continue on Friday.

Radioactive Waste Processing Ship's Equipment to be Updated

LD0707171894 Moscow INTERFAX in English
1603 GMT 7 Jul 94

[Text] Together with a tender for the construction of a floating installation for processing liquid radioactive waste from Pacific Fleet vessels, the vessel Pinega which has out-of-date equipment is going to be modernized.

The head of the military installation radioactive supervision department of the State Atomic Supervision Committee, Nikolay Shapovalenko, told Interfax that the obsolete installation had not been used for the last two years and would be modernized.

Shapovalenko said the introduction of a modernized installation on Pinega will promote the resolution of the waste deposition issue as holding the tender attended by foreign companies and constructing a new installation will take quite a bit of time.

Shapovalenko pointed out that the State Atomic Supervision Committee will take part in assessing the radioactive safety of projects submitted for the tender.

One of the main requirements for all projects is the absence of secondary radioactive waste which usually appears during maintenance and decontamination of the equipment.

'Komsomolets' To Be Training Site for Radiation Safety

LD0707142694 Moscow ITAR-TASS in English
1353 GMT 7 Jul 94

[Article by ITAR-TASS correspondent Roman Denisov]

[Text] Moscow July 7 TASS—The Russian Ministry for Emergency Situations regards the problem of the "Komsomolet 6" nuclear submarine, which sank in the Norwegian Sea, in a much broader range of related problems. The area of the sunk submarine is expected to be turned into a kind of a test site for training and coordinating activities to prevent radiation danger at sea. This is necessary to provide a guarantee against such accidents in future, and work out a system of urgent counter-measures if an accident does occur.

This was reported by the chief coordinator of an expedition sent to the area of the accident, Deputy Russian Minister for Emergency Situations, Sergey Khetagurov.

The expedition is currently beginning its main operations. Apart from the "Keldysh" research vessel which has been for some time already in the area of the expedition, another oceanographic research vessel "Semen Dezhnev" arrived in this area of the Norwegian Sea. For the first time, five years after the accident, on board the research vessel are not only experts, but representatives of the mass media as well.

According to Khetagurov, the aim of the expedition this year is to conduct concrete operations to minimize possible after-effects of the accident on the nuclear submarine. The expedition will continue radiation monitoring and seal the bow of the Komsomolets. For this purpose, the "Rubin" industrial association produced nine plugs made of a special alloy. The installation of these plugs on the submarine will enable to considerably reduce the flow of water through damaged compartments of the submarine, preventing the spread of plutonium discharge out of the submarine.

Pacific Fleet's Radioactive Dump 'Poses No Danger'

LD0707114394 Moscow *ITAR-TASS in English*
1026 GMT 7 Jul 94

[Article by ITAR-TASS correspondent Sergey Borovkov]

[Text] Petropavlovsk-Kamchatskiy July 7 TASS—The situation at the radioactive waste dump of the Pacific Fleet where a leak took place in June poses no danger for residents of the nearby Kamchatka settlements. The radioactivity level does not exceed permissible norms, TASS was told on Thursday by Boris Kopylov, chairman of the Kamchatka nature protection committee.

Several days ago a group civilian and military experts checked the dump and said radioactivity was normal there. An analysis of water and soil samples near the site also confirmed the data.

Civilian experts are now preparing another inspection which is being delayed, according to Kopylov, by bureaucratic procedures of allowing unauthorised personnel to the military object.

Kopylov said that his committee tries to keep the situation under control to avoid new emergencies.

Unions Discuss Aid to Regions Hit by Radiation Accidents

MK0707092094 Moscow *SEGODNYA in Russian*
7 Jul 94 p 2

[Report by Andrey Nikolayev under the "Radiation" rubric: "Chernobyl Accident Aftermath Still Not Eliminated While Social Aid Programs Are Being Quietly Curtailed"]

[Text] Participants in an interregional trade union conference in Moscow on problems of social security for the population of Russian oblasts affected by the Chernobyl and other radiation disasters have made a decision to bring to President Boris Yeltsin's notice the fact that state organs are not fully implementing the Russian Federation law "On Social Security for Citizens Affected by Radiation Owing to the Catastrophe at the Chernobyl AES [Atomic Electric Power Station]."

Vladimir Ivashutin, chairman of the Association of Trade Unions of Russian Federation Oblasts Affected by the Chernobyl AES Accident, stated at the conference that hundreds of thousands of people currently live in Russian regions affected by radiation, including Bryansk, Kaluga, Kursk, Orel, Ryazan, Tula, Chelyabinsk, and other oblasts. The sickness rate is on the rise in virtually all these oblasts. This is especially conspicuous in the population centers of seven southwestern rayons of Bryansk Oblast, which has the Russian Federation's highest density of radiation pollution. In Altay Kray, for example, the number of children under 14 affected by blood diseases is twice that in the rest of Russia, and seven times as high among teenagers between 15 and 17.

Out of 14,000 sick children in Bryansk Oblast, 14 were found to have thyroid cancer. World experience shows, the trade union leader said, that there is usually one thyroid cancer case in a million children.

At the same time, it was stated at the conference, the Russian Federation Health Ministry is not making fully available the money to act on the Russian Federation laws "On Social Security for Citizens Affected by Radiation Owing to the Catastrophe at the Chernobyl AES" and "On Social Security for Citizens Affected by Radiation Owing to the 1957 Accident at the 'Mayak' Production Association and the Dumping of Radioactive Waste into the Techa River," as well as to act on the "Children of Chernobyl" program and other legislative acts. There is also a tendency to roll back the program of social security for the population of the oblasts affected by radiation, which, conference participants believe, can only increase social tensions in these regions. More so because many of the sufferers still have no chance to get medicine and medical services, especially specialized medical services.

The conference decided in this connection to turn to Yeltsin with a request for the president to ensure that all organs of state power work in a coordinated and efficient way and strictly follow all the laws and programs related to the elimination of the aftermath of the radiation disasters. The conference participants also proposed that the state should keep tabs on the uninterrupted provision of funds for the implementation of legislative acts aimed at social security for the population affected by radiation.

'Greens' Remain on Political Sidelines

94WN0325A Moscow *NEZAVISIMAYA GAZETA*
in Russian 15 Jun 94 p 6

[Article by Irina Sosunova, candidate of philosophical sciences, Russian Academy of Sciences Institute of Social and Political Research: "Degradation of the Human Habitat in Russia Is Becoming a National Disaster"]

[Text] The poor environmental situation continues to be an important factor shaping the sociopolitical situation in the Russian Federation.

On the territory of the former USSR, according to 1990 data, there were about 290 areas that had an extremely poor environmental situation. They covered up to 15 percent of the territory, and one in every five citizens of the former USSR lived in them. According to the estimates of the Russian Academy of Sciences Institute of Geography, by 1993 the territory of Russia with an extremely poor environmental situation had increased to 17 percent. That would not seem to be so much, but that area is nearly twice the size of Mexico and more than six times the size of France. From 30 percent to 40 percent of Russia's population lives there.

Except for a limited number of the most "politicized" regions (such as Moscow), the condition of the environment generally ranks third in importance among the causes of public concern.

In this connection, the effectiveness of environmental protection efforts often becomes one of the first victims of the difficult economic situation: thus, an overall 18.8 percent reduction in industrial production in 1992 compared with 1991 did not result in an equivalent reduction in environmental pollution—the amount of emissions into the atmosphere dropped by only 11 percent, and the amount of pollution of water basins remained practically unchanged. These figures clearly attest to an attempt by enterprises to save money on environmental protection technologies that are already poorly financed to start with.

The gravest environmental situation has developed in the northern Caspian region, Kalmykia, the central Volga region, the Azov-Black Sea region, the Urals, the Kuznetsk Basin, the Kama River region, and the Angara River basin.

In objective terms, the continuing degradation of the environment is reaching the level of a national problem for the country and creating a real threat to the very existence of organized human communities. That makes the emergence of a new factor in the deterioration of the environmental situation—Russia's becoming a dump for West European industry's hazardous waste—all the more dangerous.

According to the data of the Greenpeace international organization, in the period from 1987 through November 1993, 95 attempts were made to bring 34 million tonnes of hazardous waste into the country.

The crisis in the Russian economy is creating the objective preconditions for an intensification of this process. The financial difficulties of industrial enterprises and entire regions are prompting them to accept Western companies' extremely dangerous proposals for the burial and industrial recycling of waste. At the same time, the West European countries are, for all practical purposes, relieving themselves of the considerable expense associated with the development of "clean" technologies at home.

Thus, we see an objective coincidence of the economic interests of foreign and Russian partners, a coincidence which forms the basis for lobbying for projects that are suicidal from the standpoint of Russia's national interests.

So far, most such projects have been connected with the burial of spent nuclear fuel; the burial of sewage sludge (total proposals for 1993 added up to about 12 million tonnes); the burial or recycling of chemical products that have passed their expiration dates (including pesticides); the importation for subsequent utilization of ash and slag from trash-burning plants (total proposals for 1993 came to about 10 million tonnes); the recycling or incineration of automotive tires; the construction of trash-burning plants oriented toward the reprocessing of waste shipped into the country, and so forth.

The inadequate development of Russian legislation on environmental protection problems and the objective

weakness of regional environmental protection services increase the likelihood of various abuses.

The results of sociological studies in the past few years indicate that discontent with the deteriorating environmental situation is increasing among the public. In a number of regions, especially in those where environmental conditions are the poorest, they have already become one of the main factors in increased social tension.

The distinctive features of the present sociopolitical situation in Russia make the "environmental factor" in politics exceptionally important for the development of conflicts between the Center and the components of the Federation. The course of the campaign for elections to the Federal Assembly in December 1993 confirms this thesis.

However, environmental movements per se are not yet playing a serious independent role in political processes because of their organizational weakness, disunity, lack of sufficient prestige among the public, and other factors. Attempts at improvisation, such as the Siberian Pine Constructive Environmental Movement's participation in the December elections, have produced unsatisfactory results.

Thus, our country's "green" movements, unlike their Western counterparts, remain on the sidelines of political life. The "environmental card" is being played by Russia-wide political parties and powerful regional political movements.

Director Details Work of Volga Ecology Institute

94WN0325B Moscow *DELOVOY MIR* in Russian
3 Jun 94 p 4

[Interview with Professor Gennadiy Rozenberg, doctor of biological sciences and director of the Russian Academy of Sciences Volga Basin Ecology Institute, conducted in Togliatti by staff correspondent Aleksandr Vorobyev; date not given: "The Volga Is Our Pain and Our Concern"]

[Text] The Russian Academy of Sciences Volga Basin Ecology Institute in Togliatti recently celebrated its 10th anniversary. Our correspondent Aleksandr Vorobyev met with the institute's director, Prof Gennadiy Rozenberg, doctor of biological sciences.

Vorobyev: Tell me, why did the need arise to establish your research institution? After all, there are no institutes for the ecology of the Amazon or Mississippi River basins?

Rozenberg: After the Kuybyshev Reservoir started to be filled in 1956, the need arose to study the biological processes occurring in large bodies of water. Ivan Dmitriyevich Papanin, the famous polar explorer and

scientist, was responsible for establishing a biological station here. It was that station that served as the basis for the future institute, which since 1983 has been engaged in the study of the biological and environmental patterns in the regional development of the Volga basin's ecosystems.

The scope of work can be judged from the following factors: the river's watershed (the territory of the Volga basin) covers 1,360 square kilometers, or 62 percent of the area of the European part of Russia. It includes the territory of 40 oblasts and republics. There are 150,000 water outflows, including 2,600 rivers, on it. Approximately 240 cubic km of water flows into the Caspian Sea annually.

Vorobyev: And how do you assess the environmental condition of this part of Russia?

Rozenberg: The Volga basin region has one of the most stressed environmental situations. The building of dams has resulted in the formation of nearly 300 reservoirs. Because of this, the water exchange in the basin has slowed more than 10-fold, which has resulted, in turn, in a substantial alteration of the hydrobiocenoses and land ecosystems.

Every year 2.3 cubic km of polluted water (20 percent of all Russia's polluted water) is discharged into the Volga River basin. And 10.6 million tonnes of pollutants (27 percent of those of all Russia's cities) is emitted into the atmosphere of the Volga region's densely populated cities each year. The cities of Moscow, Nizhniy Novgorod, and Samara are particular cause for concern here.

Vorobyev: The condition of the Kuybyshev Reservoir has probably been the most thoroughly studied, hasn't it?

Rozenberg: I dare say so. The reservoir has existed for 35 years. How much filth has been discharged into it over that time! I have in mind the pollutants contained in the sewage of cities and effluent of industrial enterprise, and in rain and melted-snow runoff from fields packed with chemical fertilizers. It is hard to tell the pollution from the color of the water, since the substances brought in settle out in the silt. And now we are observing the reverse process—the silt is “discharging” phosphorus and other chemical elements into the water. Even if all the discharge were stopped, the self-pollution of the water would continue.

Some people propose breaking down the dams in order to renew the river's self-cleansing process. But in that case we would get a huge Chernobyl: The bottom deposits would dry up, and a pernicious cloud of toxic dust would be carried for 1,000 km.

It is time to revise our priorities in managing the economy. The problems of power engineering must not be ranked above environmental problems, and we must not live only for today. It must be said that the Volga basin has still not been very well studied from an

ecological standpoint. Our 15 laboratories and groups have a great deal of work to do.

Vorobyev: But Gennadiy Samuilovich, your institute is an Academy institute, and for that reason it is supposed to engage in basic research.

Rozenberg: Yes, if you want to use lofty language, we are supposed to discover the laws of nature and find out the complex mechanism of interaction between the living organism and the environment. In particular, the Presidium of the Academy of Sciences has charged us with studying the basin of a large river with a high level of industrialization as a unified ecological system; with developing measures for the protection, stabilization, and reconstruction of land ecosystems; with providing the theoretical substantiation for the problems of the preservation and expanded reproduction of aquatic life; with developing the bases for the intensification of fishing; and with conducting the study of land and water ecosystems for the purposes of the rational utilization of natural resources and the environmentally optimal siting of economic facilities. As you see, everything is linked with practice. We are not soaring in the high heavens here.

We have created a data base on the condition of the Volga River basin's ecosystems. More than 500 maps reflect the condition of forests, fauna, the climate, air pollution, soil erosion, underground waters, and the swamping of various regions in the basin. All these maps have been entered into a computer system, and they can be used by any administrator, designer, scientist, or practitioner. The maps have enabled us to calculate the regions that are the most dangerous from an ecological standpoint. They make it possible to make ecological forecasts.

Vorobyev: Is there a great demand for these maps?

Rozenberg: There is no such demand. And in general, there is almost no demand for our research. Maybe it is because our science is prohibitive. But it is most likely due to the environmental ignorance of society and of executives of various ranks who make economic decisions.

Ecology as a science is always related to the prospects for the development of society and to problems that are dealt with over the long range. It is the science of complex systems. Yet we are used to studying simple systems and taking individual factors into account. We need specialists in the study of systems who have a new way of thinking, and we need good ecological education of the public.

At present even existing knowledge is not being used in life. A vivid example is the Volga-Chegray Canal project. After all, what is needed is not to supply additional water to Kalmyk lands but to change the structural composition of the animals that are kept there. Water from the canal would change the level of the mineral diet of

animals' organisms. The institute is actively working to develop a state program titled "Revival of the Volga."

Vorobyev: Gennadiy Samuilovich, we probably cannot get by without a question about the prosaic side of your staff's life. After all, science has been put in extremely difficult conditions of existence.

Rozenberg: Judge for yourself. The average salary is 73,000 rubles. But science will not die because people are poorly paid, but because there is no money for chemical reagents and other most essential scientific needs. Equipment is obsolete. The fleet is aging, and there is no money for gasoline and other operational needs. We try to manage by various means. We are expanding the number of topics we handle on contract, are producing expert environmental studies on commission, have drawn up a design for a Chuvash National Park, and so forth. At our enterprises we produce lecithin—an animal product used in perfume production—and zootoxins—biologically active ointments. We have begun raising vipers in order to eventually obtain a snakebite-antidote serum. We have set up the production of the spores of oyster mushrooms and field mushrooms. Production is up to thousands of tonnes. This year we earned R100 million from this business.

We spend the money to acquire equipment and for other needs. So Academician Artsimovich's facetious definition, "Science is the satisfaction of one's own curiosity at the state's expense," cannot be applied to our affairs.

Missile, Space Research Firms Seek To Form Environmental Consortium

94WN0324A Moscow *SEGODNYA* in Russian
9 Jul 94 p 9

[Article by Sergey Golotyuk: "Missile-Space Firms Want To Be Retargeted on Environmental Protection"]

[Text] Executives of several leading missile and space firms convened in the cradle of Russian rocket building—the Moscow area's Kaliningrad—in order to discuss the possibility of combining efforts in the area of environmental protection.

The meeting was held at the Design Office of Chemical Machine Building, in the office of its director and chief designer, Nikolay Leontyev. In addition to the office's occupant, the meeting was attended by the directors of the Voronezh Chemical Automation Design Office, the Scientific Research Institute of Chemical Machine Building from Sergiyev Posad (despite their unassuming names, the above firms have already worked on rocket engines for half a century—the first two developed them and the third tested them), the Machine Building Scientific-Production Association from the city of Reutov, Moscow Oblast, the Moscow Scientific Research Institute of Thermal Processes, and several other enterprises, as well as representatives from a number of interested departments and committees of the State Duma and the Russian Orthodox Church.

The meeting was organized by Aleksandr Dunayev, director of Glavkosmos—an intermediary organization that became famous after the recent commotion regarding the missile contract with India. He stated the opinion that it would be suitable for Russian enterprises and organizations to create the Innovative Commonwealth Consortium having the purpose of solving ecological problems in different regions of the country. This consortium should be headed, in Dunayev's opinion, by a supervisory council staffed by representatives from, besides the industrial firms, the Academy of Sciences, public environmental organizations, and state departments. Innovative agencies existing as subdivisions of the consortium would concern themselves with financial and economic work per se. They would work directly with the enterprises, bypassing the supervisory council.

From an engineering standpoint the tasks of the consortium fall into two directions: equipment to clean up the environment, and resources to monitor its pollution level. The scope can vary within wide limits: cleaning up the water, atmosphere, and soil, or just one of these three environments; methods of supervision—all the way to space-based (for example, information from a large number of terrestrial sensors picked up by satellites); territory—from several regions to all of Russia. That is, a rather flexible program is under consideration.

As follows from statements by their directors, the missile and space firms not only have the desire and the qualifications to carry this program out but also equipment already in place. Gerbert Yefremov, general designer of the Machine Building Scientific-Production Association from the city of Reutov in the Moscow area, cited the example of a drinking water treatment plant, construction of which the scientific-production association plans to begin in July.

In an eloquent statement, Yefremov said: "We created orbiting stations with comfortable conditions for the two lucky fellows who were able to fly in it; now the time has come to work for everyone else—so that they will have good water and food as well." Development of cruise and ballistic missiles and spacecraft is in the profile of the scientific-production association. Moreover, this is the only firm in the country that is working in all three listed directions at once.

Vladimir Rachuk, general designer of the Voronezh Chemical Automation Design Office, reported that the design office has developed an entire range of ozonators with productivity from 10 g to 5 kg of ozone per hour.

Ozonators make it possible to do away with traditional chlorination of drinking water, which produces dioxins that are harmful to human health. In Rachuk's words, the ozonators created by his design office consume less energy than foreign ones, at a price that is 1.5-2 times lower. Nonetheless, users usually acquire the imported devices.

The Scientific Research Institute of Thermal Processes, which developed the Katyusha rocket which acquired

fame during World War II, created several new modifications of coolants for refrigerators, air conditioners, motor vehicle radiators and so on in recent years. Now one of the mixtures is being tested by automobile manufacturers in the United States.

God himself willed developers of telemetric systems (systems for collecting and transmitting service information from rockets and satellites) to get into the business of monitoring the environment. Oleg Sulimov, director of Russia's main telemetric firm—the Scientific-Production Association of Measuring Equipment in the Moscow area city of Kaliningrad—was categorical: "All previous ecological programs have failed because there was nothing with which to take measurements." Now the main method behind the work of ecologists is to take samples and then analyze them. Samples are often taken at times when conditions are relatively favorable from an ecological point of view. Monitoring is a lengthy procedure, and it is hard to gather statistics on a particular enterprise or region. The Scientific-Production Association of Measuring Equipment is ready to create a set of instruments that will make it possible to obtain a result "here and now," and to transmit the data to regional or all-Russian centers. The corresponding program has gone through all approval stages in the State Committee for Defense Industry and is now in the State Environmental Committee.

The interests of the department to which the Glavkosmos is subordinated—the RF State Committee for Defense Industry—obviously stand behind this organization's initiative. The State Committee for Defense Industry is concerned at the serious position of firms subordinated to it, which have been deprived of the lion's share of state orders, and is attempting to find new high-technology spheres of activity for them to replace the shrinking military sphere. In this respect a coordinated and effective ecological program could become a good solution both for the country (which will have to solve the ecological problems sooner or later) and defense industry.

World Bank Approves \$65 Million Environmental Loan

94WN0324B Moscow SEGODNYA in Russian
9 Jul 94 p 9

[Article by Aleksandr Vasilyev: "Ecological Loan Granted to Russia: The Most Important Thing Is To Keep It From Slipping Through Our Fingers"]

[Text] Last week a decision was made to grant an environmental loan of \$65 million to Russia. In addition to this, \$45 million is being provided without compensation. Talks with the International Bank for Reconstruction and Development dragged on exhaustingly long, and sometimes seemed to be on the brink of failure. Numerous missions visited Russia one after the other to study the environmental projects down to the finest details. This required the assistance of not only specialists from the

Russian Ministry of Protection of the Environment and Natural Resources in Moscow but also locally—in Novokuznetsk, Volgograd, Tula, Nizhny Novgorod, and Nizhny Tagil—that is, those ecologically vulnerable and unfavorable cities and oblasts of Russia where the jointly developed projects are to be implemented. Whether or not these 12 or 13 projects will be carried out sensibly will depend on further augmentation of the loan by sponsor contributions to improvement of the ecological situation in Russia. It is hoped in the Ministry of Protection of the Environment and Natural Resources that if the results are favorable, the country will be able to repeat the path traveled by Poland, which managed to attract investments to the environmental sector that were several times greater than a similar loan from the World Bank. In addition, the system of environmental bodies, which has received absolutely unsatisfactory financing over the last two years, will be reinforced.

News of the environmental loan to Russia was in a sense a prelude to a conference of environmental ministers from countries of Central and Eastern Europe and representatives of international financial organizations in Copenhagen, where the problems of relaxing the terms of loans for environmental investments in these countries were discussed. The discussion basically involved two directions. The first—a longer term for the loans, and the second—a significantly lower interest rate. When it came time to agree upon the text of the final declaration of the conference, a fierce struggle developed between representatives of countries of Central and Eastern Europe and representatives of Western financial structures. They were represented extremely broadly at the conference—the World Bank, the European Bank for Reconstruction and Development, the European Investment Bank and, in addition, the general commissar from the European Ecology Union, Mr. Poliakrasos, and the recently appointed director of the European bureau of UNEP, Khans Viders [name as transliterated]. The fact is that the framework within which international financial organizations are operating makes it impossible to surmount inconsistencies between the financial and ecological results of the activities of these organizations. Such problems cannot be resolved in just one or two meetings. But a significant step forward was made in direct dialogue between ecologists from countries of Central and Eastern Europe and their financial donors.

In any case, Copenhagen became a necessary intermediate link between Lucerne, where a plan of action to protect the environment was adopted for countries of Central and Eastern Europe, and the next all-European meeting of environmental ministers in October 1995 in Sofia. A commercial scheme for ensuring environmental investments by states of Western Europe or international financial organizations was proposed there as a topic for discussion. Its purpose would be to activate a mechanism to encourage potential investors and embolden them.

Another issue that was raised was whether a mechanism for writing off part of the debt of countries implementing serious measures in the area of environmental protection

should be introduced. This of course pertains primarily to those countries that are helping to improve the environment on a transnational scale.

Obstacles Hinder Environmental Security Program

94WN0326A Moscow ROSSIYSKIYE VESTI
in Russian 17 Jun 94 p 4

[Article by Natalya Davydova: "Why the Program Got Thinner"]

[Text] Unless fundamental decisions are promptly made in the realm of environmental protection in Russia, an ecological situation may develop that will not only prevent the stabilization and subsequent development of the socioeconomic system, but also represent a real threat to the public's health and life.

Therefore, in 1992 the RF Ministry of Environmental Protection and Natural Resources proposed concerting the country's scientific and technological potential in order to accomplish a set of tasks connected with the development of state program titled "Environmental Security of Russia" (ESR). This idea was supported by the Ministry of Science and Technology Policy, the Supreme Environmental Council, the State Committee for Sanitary-Epidemiological Oversight and other ministries and departments.

At the end of 1992 the general concept of this special-purpose comprehensive federal scientific and technological program was spelled out in a special issue of ZELENYY MIR.

It was proposed that the program be drawn up and projects be selected in the most democratic fashion: broad discussion, the maximum consideration of applications for research work, and the holding of a competition among proposals. The structure of the ESR was divided into two main units—programs of applied research, on the one hand, and of basic and methodological research, on the other. In the 12 major sections included in the first unit, it was proposed that Russian scientists deal with a wide range of problems, from the strategic problems of ensuring environmental security to the formation of an ecological view of the world. The second set includes sections on the theory of the functioning and restoration of natural systems, analysis of the environmental impact of various types of activity, and others.

Immediately after the general concept was published, the Ministry of Environmental Protection and Natural Resources was flooded with applications from all over the country. The ministry was literally drowning in them: there were as many as 25 proposals for a single point of the program. Unfortunately, democratic principles have not taken hold very firmly in our country, especially in a situation in which, for many research groups working in the field of environmental protection, participation in the ESR meant the possibility of making

ends meet. It is no wonder that the environmental community continues to be stirred up by rumors of all sorts of violations in the formation of the ESR program. Among other things, personnel changes in the Ministry of Environmental Protection and Natural Resources—the removal from office of N. G. Rybalskiy, deputy minister, and N. N. Petrov, director of the Main Scientific and Technological Administration—have been attributed to such causes.

When the program was signed by the minister in August 1993, it contained more than 1,700 titles of research projects and represented an extremely fat volume, the size and content of which reflected the haste and fuss with which the ESR had been drawn up even more than it did the general concept that it had originally been intended to embody.

The Ministry of Economics included the ESR in among the projects in the Federal Program for the Restructuring of Russia's Economy in 1993-95. The planned cost of research work under the Environmental Security of Russia program for 1993-95 came to 20.2 billion rubles [R] (in the prices of the first quarter of 1993), and expenditures to finance it in 1993 were put at R8.87 billion and included in a separate line in the RF Law on the Budget.

In September 1993 procedures were established for organizing work to carry out the ESR State Program. The Ministry of Environmental Protection and Natural Resources specified a list of coordinating institutes (124 organizations, of which 24 were under the Ministry of Environmental Protection and Natural Resources) and assigned them the functions of allocating funds among the topics, leaving to itself the approval of technical assignments and the task of receiving and getting agreement on reports. In this case, the coordinators' amounted merely to the reallocation of budgetary monies, and the ministry was constantly working at a hectic pace in connection with the huge amount of ongoing work under the program.

The actual situation with respect to the program's financing emerged as follows: in November 1993 about R800 million had been allocated, and not until the very end of the year was R1.7 billion received. Consequently, in 1993 only 37 percent of the work under the ESR was financed, which required that the program be revised with respect to the setting of priorities among topics, and eventually required an in-depth analysis of the program as a whole.

In the process it was discovered that about 100 topics in the various sections of the program represented duplications in title and content, or that they dealt with extremely narrow problems. It turned out that the organizations responsible for carrying out the program included a large number of small enterprises (centers, foundations, and subsidiaries) that did not have their own scientific and technical facilities and, consequently, were commissioning outside work, which resulted in

additional and unwarranted expenditures. But the most serious shortcoming was the fact that the institutes responsible for handling individual topics belonged to various departments and structures, while the research organizations of the Ministry of Environmental Protection and Natural Resources were monitoring and carrying out only 24 percent of them, and those of the Russian Academy of Sciences—only 16 percent, and departmental institutes were handling the rest. Consequently, because of the lack of a single conceptual focus, the entire collection of the program's final documents could only present a mosaic of different departmental visions of the problem, and of the methods, traditions and subjective approaches of various scientific schools, making any generalization of the materials virtually impossible. This situation predictably made the Ministry of Environmental Protection and Natural Resources dependent on the interests and aspirations of the departments.

Many flaws were discovered in the performance of the main administrations of the Ministry of Environmental Protection and Natural Resources that took part in drawing up and implementing the ESR: there was no clear idea of the possibility of making practical use of the results, and the administrations sometimes adopted documentation that was clearly obsolete—that not only had been prepared during the previous five-year period, but had even been prepared under commissions from other departments.

It often happens here in Russia that when a good idea is actually carried out it comes to bear no resemblance to itself. It has now become essential to rectify the existing situation with respect to the ESR program. But you can imagine what resistance this is causing, not only outside the ministry, but even within it!

Since it was redrawn, the ESR has grown substantially "thinner" and has an implementation part that is clearly spelled out. The top-priority topics and expected results, the types of practical application and deadlines for it, and a standardized report form have all been specified. Topics have been consolidated and duplication has been eliminated. Research work has been oriented toward obtaining specific results, for which some of the technical assignments have been redefined and reapproved. The documents that are prepared will go to the direct users of the scientific and technological product—the environmental protection agencies—for carrying out work to restore the environmental situation in the various territories to normal.

Today, confidence is finally emerging that, as a result of the implementation of the ESR program that is being financed out of the federal budget, the foundations of Russia's state policy in the area of environmental protection will be developed. The fact that there has been no such policy to this day is having an unfavorable impact both on the development of the socioeconomic situation within the country and on Russia's prestige abroad.

Hydrochloric Acid Found in Drinking Water Near Khabarovsk

*MM1507093794 Moscow IZVESTIYA in Russian
14 Jul 94 p 8*

[ITAR-TASS report: "Hydrochloric Acid in Drinking Water"]

[Text] On taking samples of the drinking water used by the residents of the settlement named for Lazo, 60 km south of Khabarovsk, employees of the sanitary-epidemiological station discovered that it was contaminated by hydrochloric acid.

The Ministry for Emergencies has reported that an investigation has been started into the reasons why acid got into the drinking water. It has already been established that 207 tonnes of hydrochloric acid somehow got into the sewer system from the local chemical plant, which is now inoperative, and some of it also, obviously, penetrated the drinking water. The investigation into the reasons is continuing.

Safety of Moscow Nuclear Sites Assessed

*MM1407143194 Moscow IZVESTIYA in Russian
13 Jul 94 p 11*

[Unattributed report: "Nuclear Waste Piling Up in Moscow"—from the EKSPERTIZA section]

[Text] According to Federal Inspectorate for Nuclear and Radiation Safety experts who have checked out how radioactive waste is being stored at Moscow's enterprises, the sanitary status of the installations falls within prescribed norms. But the problem may worsen since of late the removal of spent nuclear fuel has dropped owing to the dramatic increase in the cost of transporting and processing it. As a result nuclear waste is piling up in Moscow.

There are four major nuclear centers operating in Moscow, including the "Kurchatov Institute" RNTs [expansion unknown], the Institute of Theoretical and Experimental Physics [ITEP], the Moscow Engineering-Physics Institute [MEPI], and the Research and Design Institute of Power Generation Technology [RDIPGT].

A number of other enterprises (the Moscow Power Engineering Institute [MPEI] and the VNIIEKhT [expansion unknown]) use nuclear research and training installations, but in terms of numbers and specifications they are not as important as the above.

The number of nuclear research installations in Moscow rose until the early eighties to 52. Commissioning was extremely intensive. Subsequently the quantity and intensity of commissioning of nuclear installations in Moscow dropped. At present there are around 40. Half of them are used no more than three months a year. Of the installations in operation, nuclear research reactors [NRR's], of which there are currently nine in Moscow, can be particularly singled out.

Total number of NRR's and test sites:	
"Kurchatov Institute" RNTs	27
RDIPGT	4
ITEP	2
VNIKhT	1
MEPI	7
MPEI	1

Many of Moscow's NRR's were designed and built in the fifties and sixties, when there was still no adequate normative base on nuclear and radiation safety. Virtually all the reactors fall short of the present norms and regulations in various ways.

Since Russian Ministry of Atomic Energy and "Kurchatov Institute" RNTs reactors were placed under supervision in 1992-1993 the Federal Inspectorate for Nuclear and Radiation Safety has introduced a system for the gathering and analysis of information pertaining to violations in the work of NRR's.

According to Russian Federation Inspectorate for Nuclear and Radiation Safety records, there has been no record over the last two years at Moscow NRR's of any violations of safe operating conditions or limits that have resulted in the population being overexposed to radiation or in environmental contamination. And a slight decline in the number of emergency shutdowns of NRR's has been recorded.

In 1992-1993 there was no record of radioactive emissions and discharges in excess of permissible norms. The radiation situation at the installations did not exceed background level.

As a result of its 50-year history a complex environmental problem cropped up at the "Kurchatov Institute" RNTs primarily due to the need to rehabilitate the territory of temporary radioactive waste storage facilities and prepare for the decommissioning of outdated NRR's. The temporary storage facility zone on the Center's territory covers an area of two hectares. The storage facilities began to be filled in the mid-forties and do not meet present requirements.

In premises constantly occupied by staff the radiation dosage fluctuates between 0.2 and 0.02 microrentgens per second, which is considerably lower than the permissible radiation dosage of 0.8 microrentgens per second. At the same time the staff's annual individual dose of radiation on average was 0.3 rems, as against a permissible radiation dosage of 5 rems. During repairs and also during technical maintenance of NRR equipment and experimental apparatus staff are subject to considerably higher radiation than when the reactor is operating to capacity, but the dose does not exceed 20 millirems per working shift.

No one has been found to have received more than 0.3 of the maximum permissible dosage. No one has been found to have received the maximum permissible dose or more.

Experts' Findings

1. On the basis of the results of the evaluation of the state of safety of NRR's, two installations at the "Kurchatov Institute" RNTs—the IR-8 and MR reactors—have been shut down as a result of shortcomings in their safety procedures and failure to comply with norms and regulations governing the use of equipment and pipelines, which constitute the main ingredient of radiation protection. The commissions deemed the state of safety at other installations acceptable enough for them to continue operating.
2. The severing or weakening of ties between enterprises that own NRR's and the planning, design, and scientific institutes and enterprises which manufacture the equipment makes it difficult to implement programs for the modernization, reconstruction, and decommissioning of NRR's, and the restriction of state funding of scientific organizations has resulted in a reduction in and exodus of qualified cadres and young people from enterprises. The growing shortage of cadres and lack of young qualified personnel may result in the enforced shutdown of certain NRR's, which will cause difficulties with regard to subsequently ensuring the nuclear and radiation safety of the installations.
3. A program for the use of NRR's is needed to enable the problems of radioactive waste, storage of spent fuel, and decommissioning to be resolved in a systematic manner.
4. Specific timeframes must be established for the decommissioning of "aging" reactors that fail to comply in varying degrees with the requirements of technical documentation, particularly in connection with the main equipment being outdated and worn out. Nonoperational installations are still hazardous in nuclear radiation terms.
5. The status of security at the reactors in operation must be "reevaluated" using contemporary approaches.

Komsomolets Torpedo Launchers Prepared for Sealing

LD1207192694 Moscow INTERFAX in English
1759 GMT 12 Jul 94

[Text] During an expedition of the Russian Emergencies Ministry to the site where the nuclear submarine Komsomolets sank in the Norwegian Sea two of its rocket launchers with nuclear torpedoes were prepared for eventual hermetic sealing.

The ministry told Interfax that as a result of dives of the bathyscaphes Mir-1 and Mir-2 the bottom exit frames of the launchers were fixed with five holders, and two protective shields were delivered to the crash site.

The expedition's main goal was to hermetically seal the two launchers of the submarine which sank in April 1989.

The safety measure is to prevent contamination of the environment with plutonium and other radioactive substances. The main danger comes from the torpedoes' rusting cases. Special substances were planted in the reactor department of the submarine to absorb moving radioactive materials.

The expedition is carried out with the research vessel Mstislav Keldysh. A laboratory on board the vessel will carry out studies on the environment in the vicinity of the Komsomolets and carry out research on the likelihood of radioactive substances harming people through the fish they eat.

Further on Environmental Program for Lake Baykal

*LD2207031694 Moscow ITAR-TASS World Service
in Russian 1508 GMT 21 Jul 94*

[Article by ITAR-TASS correspondent Gennadiy Yezhov]

[Text] Moscow, 21 Jul—The Russian Federation Government today approved the integrated federal program for the protection of Lake Baykal and the rational use of its natural resources. The program is meant to last until the year 2000 and envisages allocating more than 1.5 trillion rubles for ecological protection measures. Baykal is a unique work of nature containing 20 percent of the planet's fresh water reserves.

Among other things, the program provides for reducing harmful emissions by local enterprises, closing down or redesignating enterprises posing a particular danger for the environment to safe and ecologically permissible output, technically reequipping and reconstructing them, or moving them beyond the region's boundaries to a more ecologically stable zone.

The program also provides for transition toward the use of ecological types of fuel, electricity, and heat supplies in the protected zone along the shores, centralized production of thermal energy, and the conversion of vehicles in the region to the use of unleaded gasoline and natural gas.

Russian Acting Finance Minister Sergey Dubinin said the enterprises polluting the Baykal ecological system should contribute a considerable proportion of the funds for financing the program. In particular, he proposed that fines be exacted more strictly and in full on those polluting the environment.

Analysts: Totsk Exercises Will Not Cause Ecological Damage

*LD2107182594 Moscow INTERFAX in English
1629 GMT 21 Jul 94*

[Text] State Duma analysts believe that the joint Russian-American headquarters exercises to be conducted at the Totsk test range in the Orenburg region (the Urals) will not have any negative environmental consequences,

Chairman of the Duma Defense Committee Sergey Yushenkov told Interfax (early this week when he visited the Orenburg region at the head of a parliamentary delegation).

In May the State Duma opposed these exercises on the grounds of environmental damage and negative public opinion.

Yushenkov believes that the federal authorities should not reject these exercises and should earmark a special territory near the test range for those opposing the exercises.

"One should not be afraid of public demonstrations of protest. These are indeed being artificially inspired by false and absurd rumors that the United States will use psychotrope and other harmful arms during the exercises," Yushenkov said.

He said that he had met with representatives of the presidential apparatus and explained his position. At the same time Yushenkov pointed out that the Defense Committee is in favor of parliamentary hearings to make public information about the tests of chemical weapons in the thirties and of nuclear weapons in 1954.

Government Approves Protection Program for Lake Baykal

*LD2107131794 Moscow Mayak Radio Network
in Russian 1200 GMT 21 Jul 94*

[Text] The Russian Government is holding a regular session today. It has approved in the main a federal program for the protection of Lake Baykal, which was prepared by the Ministry of Ecology. As far as discussion of the draft law on private farming planned for today is concerned, it has been put back for the time being pending adoption by the Duma of the program for the second stage of privatization. Meanwhile, and we have just received this report, the Duma once again failed to adopt this draft—212 deputies voted for it, with 74 against and two abstentions. But 226 votes in favor had been necessary for the document to be adopted.

Duma Holds Parliamentary Hearings on 'Closed Cities'

*LD2007122294 Moscow INTERFAX in English
1029 GMT 20 Jul 94*

[Text] In the near future "we will view Chernobyl as a paradise" compared with catastrophes which await us if we do not solve the problem of "closed cities," Chairman of the State Duma subcommittee on the military-industrial complex Stepan Sulakshin declared on Tuesday. He addressed the parliamentary hearings on the problems of "closed cities."

Director of the factory Nerpa (Murmansk-60) Pavel Steblin (the factory replaces and repairs "cores" of nuclear reactors from atomic submarines) reported at the hearings that according to available information,

there are about 113 atomic submarines with obsolete reactors, they remain afloat "by artificial means" according to him. However, Steblin said, the factory Nerpa does not receive any funds for disassembling of old reactors—for creation of complex for this process or for mastering the technology of disassembling.

According to Steblin, a near-sighted economy can lead to disasters greatly exceeding Chernobyl.

At present there are 35 "closed cities" on the Russian territory (closed administrative-territorial entities). More than two million people live there. These "closed cities belong to the Atomic Energy Ministry, Defense Ministry, and State Defense Industry Committee and produce extremely dangerous products—atomic, chemical, rockets, etc.

The deputies pointed out that the reduction of state orders for the production of the military-industrial complex by 7-8 times, low wages, growing unemployment, and insufficient and irregular financing represent the major problems for "closed cities."

Participants of the parliamentary hearings proposed to pass laws to ensure priority financing of enterprises located in "closed cities."

Ecology Panel Discusses Pollution in Space, on Earth

MM1907145994 Moscow ROSSIYSKIYE VESTI in Russian 16 Jul 94 p 1

[Report by Tatyana Dolgaya: "We Are Dangerous Slobs Both in Space and on Earth"]

[Text] Three-fourths of all space junk of terrestrial origin is Russian. These are NASA's figures, and they were not contested at the session of the Russian Security Council Interdepartmental Commission on Environmental Safety. This is the first time since we got involved in space activity that a comprehensive attempt has been made to establish how that activity influences the environment.

Hundreds of tonnes of fuel are released in the space rocket launch zones each year. The pollution zones surrounding test sites stretch for 100 or more kilometers. The area set aside for rocket launches in Russia comes to 11 million hectares. Three-hundred tonnes of toxic fuel—NDMG [expansion unknown]—which is extremely dangerous to humans, has built up in the regions where rockets and launch vehicles come down.

But even the shameful statistics regarding the influence of space activity on healthy people on Earth and on the ecology of vast areas are not so striking as the figures concerning the effect on near-Earth space. On their basis scientists draw the conclusion that global changes in the properties and functions of that environment have already been possible in our time: A violation of the natural balance of hydrogen with, as a consequence, a

change in the ionosphere, and a violation of the energy balance of the environment with, as a result, a change in density and temperature.

The chief space slob—Russia—has lacked hitherto a package of protection measures for this essentially new natural environment—the near-Earth environment. These have now been proposed by the members of the interdepartmental commission as the basis for a future governmental decree. In commission members' opinion, that should serve as the starting point for the development of a system of environmental safety for the country's space activity.

Provided, of course, this future decree does not suffer the fate of many government documents. The commission's examination at the session of the second agenda item—ensuring environmental safety during emergency situations—gives grounds for thinking that such a fate is possible.

The main reason for the environmental mess in Russia is accidents produced by technical breakdowns accompanied by discharges of dangerous chemical, biological, and radioactive substances into the environment. There were 923 of them last year: 3,232 people suffered their effects, 1,050 died as a consequence. The causes of these tragedies are well known—the deterioration of our production facilities and the flagrant lack of technological discipline. But there are other causes of tragedies too—the nonfulfillment of government decrees (for example, the decision to create an environmental safety subsystem), the lack of the requisite finance, and the uncoordinated action of ministries and departments, as the following telling detail illustrates. The question of where ecology as such ends and an emergency situation begins was very seriously discussed at this high-powered government commission. In this context, discussion also focused on the division of responsibility for problems between the Ministry of the Environment and Natural Resources and the Ministry for Affairs of Civil Defense, Emergency Situations, and the Elimination of Natural Disasters. As if these ministries were to just about come into being.

Committee Report Sounds Pollution Warning

MM1907141194 Moscow PRAVDA in Russian 15 Jul 94 p 2

[Article by Marina Eratova: "Food, Air, and Water Getting More and More Dangerous. Warning by Russian Federation State Committee for Sanitary and Epidemiological Supervision"]

[Text] So is this what happens: Some important state officials compose piles of circulars while others, equally important, take them into consideration, but the affairs of state, as the saying goes, "leave much to be desired..."? It seems that the people who have their noses to the grindstone and the perpetual motion machine of bureaucracy have not yet broken down once. However, all this

This report contains information which is or may be copyrighted in a number of countries. Therefore, copying and/or further dissemination of the report is expressly prohibited without obtaining the permission of the copyright owner(s).

would be fine—our brother bureaucrat does after all have to feed himself somehow—if your future and mine were not impeded by this bureaucratic megalomania. When generating this paper, the authorities are not forgetting to keep us simple mortals in their sights: Don't play up or make waves—we know better what you should breath, drink, and be fed on.

So here we have this extremely important document—the national report on the sanitary and epidemiological situation in Russia—which is for government attention and was recently discussed at a session of the Russian Federation State Committee for Sanitary and Epidemiological Supervision Collegium. But what small disclosures is it making? It certainly does not add to our optimism in these troubled times, and even warns that it is most likely impossible to go on living like this, and, even if it is, then only for a very short period. Maybe the scientists' opinions will protect some people, including the powers that be, from making rash decisions.

Let us start from that without which none of us as yet can manage—the air we have the honor to breath. It emerges that almost one-third of Russians live in conditions where there are excessive amounts of harmful substances in the air. It is particularly difficult to breath in Kemerovo, Novokuznetsk, Prokopyevsk, Bryansk, Dzerzhinsk, Moscow, Ufa, Kirovograd, Nizhniy Tagil.... The list can be added to. It is for this reason that people in the cities of the Central Urals, for example, suffer from diseases of the respiratory organs, the liver, and the nervous system. In Vladivostok people are ever more frequently seeking first aid with illnesses of the respiratory and cardiovascular systems....

The environment in many of the country's regions is today the cause of the most diverse illnesses whose existence has not been suspected by man. Why on earth do people not escape from there now? I would like to ask this same question of those who are responsible "for the air" in these regions, to whom the men of science are appealing not for the first time. They have carried out their work—made studies, drawn general conclusions, put them on the table, and issued warnings. What will happen in the future? As has been the custom in Russia, things in the future will be left to luck. But what if luck is not on our side?

"Well, what's the problem with the air?", some optimist will say. "We breath it and it's alright, and we still will not, as the saying goes, be able to have enough of it before we die.... As for the water—it's great!" Here this piece of folk wisdom comes to mind more and more: Don't drink this water, Johnny, or you'll turn into a little kid [kozlenochek]. The scientists have established a link between drinking water and gastric illnesses in regions like Arkhangelsk, Kaluga, Kemerovo, Kaliningrad, Tomsk, Tyumen, and Yaroslavl Oblasts, Maritime Kray, and the republics of Dagestan, Karelia, Komi, Yakutia, and Karachayevo-Cherkessia. Whereas in 1991 there were nine epidemics of acute kidney illnesses and 877

people were affected, there were 21 epidemics in 1993 and 2,992 people were affected. They included dysentery and typhoid fever, and the numbers of those affected were always in three figures.

In many of the country's regions, particularly in the Volga Region, Siberia, and the Far East, surface water with a high level of chemical and bacteriological pollution is used for the water supply in spite of there being large reserves of ground water. But where can the waste products be dumped? In the water of course! In 1993, 21 million cubic meters of polluted sewage were dumped in our reservoirs. In Krasnodar Kray, for example, the figure was 3.102 million, in Moscow—2.356 million, in St. Petersburg—1.568 million, and in Irkutsk Oblast 1.529 million.

In a few places, of course, fines are being imposed. So they pay up, but what can these "harmful" enterprises do with themselves? Not all can afford purification plants—it is cheaper to pay the fines. When sanitary legislation was violated in 1993 and the sources of water supply and drinking water were polluted, 7,714 fines were, for example, imposed, and 116 cases were passed on to the investigation agencies for their scrutiny. Is this a lot? Probably, the people who should decide are those who drink the water "flavored" with the various chemical additives and later have to be treated for stomach ulcers, gastritis, and cholecystitis, suffer from ischemia, and get hypertonia. Surely all this is caused by the water? Scientists have established that even backwardness in children's physical development is due to water containing certain pollutants of the class of hydrocarbonates. You can also add to the list of illnesses.

What about the famous artesian wells? Nickel has, for example, been found in them in Voronezh. Phenols and petroleum products have been found in them in Lipetsk, Izhevsk, Orenburg, Samara, and Novomoskovsk (Tula Oblast).

The local organs of executive power, let alone the supreme authorities, do not, it seems, consider these problems to be important. Insufficient equipment exists to cleanse drinking water, therefore almost one-third of communal water supplies do not meet sanitary standards. But very little money is being appropriated for repairs and to build new water pipelines. People say that we'll get by, that the water sprite is not as terrible as the scientists make him out to be; just give them the chance and they will instruct you to not to leave your house at all or put one foot on the ground. Indeed, they speak forthrightly about how 1.6 billion tonnes of dangerous waste products have now accumulated at dumps and on scrap heaps, which is why the soil is polluted with heavy metals: copper, zinc, lead, tin, cadmium, and others.

"I understand," the reader will say, "you cannot act without caution, it is inadvisable to drink from the water supply and wells, it is not at all desirable to breath what the neighboring combine is offering. But perhaps the post-Soviet menu is safer and more nourishing?"

He will provide his own answer: "Alas, it is not!" Today it is your purse which dictates what you eat. The fact that the population's food determines the nation's health began to make us squirm a long time ago. Nobody objects. But where can this health be obtained when, according to figures from Russia's State Committee for Statistics, meat production in the country has fallen to 52 kg per head of the population, milk to 316 kg, and eggs to 272 per annum? But this, you see, is if you divide it up among everybody and everyone has, so to speak, something to eat, as they say in Odessa. However, not everybody today can afford to try these products which were once available to everybody. Then you get something like the average patients' temperature in a hospital: This is all very well, the only thing is that they are not taking into consideration the fact that this "average" is derived from, amongst others, the temperatures of those who will die. Today, according to figures from sociological polls, 80 percent of the family budget is spent on food, and in spite of this it can hardly be described as normal healthy food in the majority of families, not to mention its vitamin content. For example, only four percent of Orenburg school children get the required quantity of vitamin C. Does the fact that the country is awash with bananas mean that the vitamin they contain is that which is necessary to feed the nation? Hardly. Russia has never suffered from the poor quality of land they wish to ascribe to it today, as they hurriedly buy up produce abroad, allegedly in the interests of the "ordinary people."

Quite a few laws, edicts, and decrees have been adopted recently on questions of the country's health. You become dazzled by the official documents. What new information will the government, or you, the reader, and I learn from the current document? Nothing apart from the fact that our life continues in increasingly unfavorable ecological, bacteriological, economic, financial, and social circumstances.

Norway To Take Russians Fleeing Possible Kola Disaster

LD1107042994 Moscow Radio Rossii Network in Russian 0300 GMT 11 Jul 94

[Text] In Norway a plan of emergency action in the event of the need to receive several thousand Russian refugees following a possible ecological catastrophe on the Kola peninsula or as a result of a political cataclysm in Russia has been drawn up. This was reported in an interview with ITAR-TASS by the press secretary of Norway's Ministry of Labor. According to him, the plan is a working document and has to be approved by the government of Norway. The dates for the official adoption of the plan have not yet been set. Even after the plan has been adopted by the government, it will remain a classified document.

Report Views Environmental Issues, Problems

LD1007194994

[Summary] Russia has no modern storage facilities for radioactive waste, and it is stored on the territory of nuclear power stations. The heads of three of the largest nuclear power stations have asked the Russian Government to grant them the right to process foreign nuclear waste, with its subsequent return to the owners. This would allow large sums of money to be earned that could be used to build proper storage facilities for radioactive waste. The Duma, however, has just passed a law prohibiting the import of foreign nuclear waste into Russia.

The sickness rate among Moscow children has risen by 16 percent in the past year alone, with diseases of the respiratory tract and the immune system increasing by 20 percent. This is attributed to the bad ecological situation in the city.

The NEZAVISIMAYA GAZETA newspaper writes that the Norilsk nickel combine ejects over two million tonnes of sulphur dioxide, which also contains heavy metals, into the atmosphere every year. As a result, over 300,000 hectares of forest have perished, and 500,000 hectares have been damaged.

By the way, the combine produces metals of the platinum group that are exported to Japan and the United States, where they are used in catalysts to purify car exhausts, i.e. to protect the environment.

KYRGYZSTAN

Anti-Nuclear Leader Seeks Regional Health Monitoring Unit

LD1907180894 Moscow INTERFAX in English 1640 GMT 19 Jul 94

[Text] The leader of the Kyrgyz anti-nuclear movement Lop-Nor Kazimir Karimov said it was necessary to set up a government commission of China, Kyrgyzstan and Kazakhstan to study the effect of Chinese nuclear tests on the environment and public health in neighboring countries.

Nuclear arms tests at the Chinese Lop-Nor test site are a problem not just for Kyrgyzstan and Kazakhstan, but for all of Central Asia, including Iran and Turkey, the professor told Interfax.

He said such a study was necessary due to the results of a Kyrgyz-Kazakh-Russian expedition that studied the environment before and after the latest test on June 10, 1994. The studies showed that after the blast background radiation in Issyk-Kul and Naryn regions, closest to the border, went up by 30 to 40%, in the more distant Chuya valley and Bishkek by 10 to 15%. Besides, experts discovered in the atmosphere strontium and caesium that are emitted only in nuclear explosions.

This report contains information which is or may be copyrighted in a number of countries. Therefore, copying and/or further dissemination of the report is expressly prohibited without obtaining the permission of the copyright owner(s).

They believe it will take at least two years to analyze the materials concerning the influence of environmental changes on public health. However, there are reports already that after the latest blast the condition of persons exposed to the 1986 Chernobyl nuclear disaster worsened radically. Besides, seismologists registered changes in the earth's crust after the explosion which might provoke new earthquakes in Kyrgyzstan and Tajikistan that lie in an active seismic zone.

Last month the Kyrgyz Foreign Ministry declared that the continuation of tests in Lop-Nor cannot promote peace, confidence or security in Asia and the Pacific.

UKRAINE

Minister Scores Handling of Nuclear Issues

944K1623A Kiev ZELENYY SVIT in Ukrainian
No 8, Jun 94 p 1

[Statement by People's Deputy Yuriy Kostenko, minister of environmental protection of Ukraine, at press conference at Ministry of Environmental Protection on 9 June 1994: "Why Did the Minister of Environmental Protection Refuse to Be Chairman of the Supreme Council Ecological Commission?"]

[Text] An explanation by the minister, People's Deputy of Ukraine Yuriy Kostenko, concerning the reasons for his refusal to head the Supreme Council Commission for Ecological Policy Issues was one of the issues at a press conference held on 9 June of this year at the Ministry of Environmental Protection of Ukraine. We publish the statement of the minister in an abridged form without comment.

The minister said: "In conjunction with my refusal, accusations have been leveled in the press to the effect that I am trying to sit on the sidelines of the complex ecological problems Ukraine is now facing.

"I believe that the problem of eliminating the consequences of Chernobyl is the greatest priority and the most pressing problem for Ukraine. The situation that emerges in the nuclear sector will influence the status of Ukraine for many decades. At present nuclear legislation is completely absent in this sector. There is no law which would regulate legal relationships in the process of using nuclear energy and in handling radioactive waste. Complete chaos in executive activities has emerged. Five ministries provide management in the sector of nuclear energy and the use of radioactive elements. Five or six departments regulate and control this important sphere. The functions of these departments are not clearly delineated, making it possible for the powerful military and nuclear lobbies to create prerequisites for the emergence of ecological crimes, just as in the old times. The vagueness of the relationship between power and control organs is used by the nuclear lobby to push through its inhumane and antiecollogical decisions. The latest Ukrainian president's edict on the development of nuclear

power generation is a graphic example of this. This edict was not coordinated with any control organ. For this reason its implementation will actually mean new ecological crimes or new ecological problems for Ukraine.

"Another important aspect is that we still have nuclear weapons and we should destroy them over seven or more years. At the same time, there are certain forces that are interested in having Ukraine get rid of nuclear weapons as soon as possible. This will later help them to solve other political problems. These issues should also be resolved.

"For this reason, I proposed that the Supreme Council establish a commission for issues of nuclear policy and nuclear regulation which would assume responsibility for coordinating these issues both at the legislative level and in the executive sphere. As you know, such a commission has been confirmed. I have gone to this commission to work, and I will endeavor to implement everything that has been developed in the Ministry of Environmental Protection and requires regular solutions."

Radioactive Contamination of Water Sources Viewed

944K1623B Kiev ZELENYY SVIT in Ukrainian
No 8, Jun 94 p 4

[Interview with Doctor of Biological Sciences Mykhaylo Kuzmenko, chief of the fresh-water radioecology department at the Hydrobiology Institute, academician of the Ukrainian Ecological Academy, by ZELENYY SVIT Editor in Chief Mykhaylo Prylutsky: place and date not given: "What Kind of Water Is the Donbass Drinking?"]

[Text] In general, what do we know about the post-Chernobyl ecological status of bodies of water in Ukraine, especially the Dnieper, which nourishes the fields and supplies millions of people with food and drink?

ZELENYY SVIT editor in chief Mykhaylo Prylutsky discussed this with Doctor of Biological Sciences Mykhaylo Kuzmenko, chief of the fresh-water radioecology department at the Hydrobiology Institute, academician of the Ukrainian Ecological Academy.

Prylutsky: Mykhaylo Illich, to this day many rumors are circulating and there is much controversy concerning the pollution of bodies of water in Ukraine by radionuclides. It is hard to know how much of this is truth and how much is fantasy. Therefore, we would like to hear what you as a specialist have to say.

Kuzmenko: By now everybody knows that after the explosion at the Chernobyl AES [Nuclear Power Station] radionuclides flew all over the world. They have been detected in the ecosystems of Scandinavian countries,

Asia, and even America. So, what is there to say about Ukraine?... To be sure, at present, eight years after the disaster, most bodies of water in Ukraine are in a quite decent condition, and there are no grounds to talk about a radiation danger being posed by them. However, we cannot say this about waterways in the 30-kilometer zone adjacent to the Chernobyl AES. Most radionuclides are carried to bodies of water in Ukraine, in particular the Kiev Reservoir, by the river Pripjat. In 1997-1983 the strontium-90 content in the water of the Kiev Reservoir came to $(1-6) \times 10^{-13}$ curies/liter, and that of cesium-137 to $(1-2) \times 10^{-13}$ curies/liter, whereas in the first half of June 1986 it increased sharply: that of strontium-90—to 4.0×10^{-10} curies/liter and that of cesium-137 to 5×10^{-10} curies/liter. In some places such readings exceeded those from before the accident by a factor of 30,000. In the years since, contamination levels have dropped, but a significant quantity of radionuclides settles in the silt and is absorbed by plants and fish....

Naturally, radionuclides migrate from the Kiev Reservoir down the Dnieper. According to data from radioecological surveys, at present the water in the Dnieper complies with the norms. Natural self-purification of the river plays a role. However, I would like to stress this as an ecologist. We have a duty to think about water quality in general. It may be very good, good, or tolerable. So, the water in the Dnieper is tolerable. At the same time it has a very broad array of chemical pollution. There are phenols, heavy metals, salts, and the already mentioned radionuclides. Unfortunately, at present our science cannot evaluate the risk to life in the entire world around us which is posed by chemical pollution and radioactive contamination. However, it is known with certainty that the negative effect of a set of toxins considerably exceeds the effect of individual hazardous substances. Therefore, against the background of the chemical pollution of water in the Dnieper even a low level of radionuclides in it may seriously damage the environment and injure the health of the people. In view of this, it is necessary to fight more vigorously than ever, through the force of law, those who continue to poison the water in the Dnieper and therefore us with chemicals.

Prylutsky: You said "us," but it is known that in Kiev, even within Kiev Oblast, water from the Dnieper is virtually not used for life or irrigation. Water from its arms and canals, such as say the Dnieper-Donbass Canal, is another matter....

Kuzmenko: This is precisely what I meant. Although significant radioecological surveys of the Dnieper and its reservoirs were taken in recent years, one of the largest waterways of Ukraine, the Dnieper-Donbass Canal, has still absolutely not been studied. It is precisely its water that is drained virtually to the bottom in order to irrigate agricultural crops and water the cattle and is delivered to the apartments of many millions of Donbass residents. I will take the liberty to dwell on this problem in greater detail.

The water intake installation of the canal is located at a reservoir in the vicinity of the city of Dniprodzerzhynsk. Water discharge comes close to 100 cubic meters/second. After running 263 kilometers through the flood plains of the rivers Arel, Arelka, Brytay, and others, the canal flows into Siverskyi Dnests below the city of Izyum. According to data, in the eight years since Chernobyl hundreds of curies in strontium-90 and cesium-137 have entered the canal. Radionuclides which enter the canal with suspended particles during the summer "blooming" of blue-and-green water plants virtually cannot be calculated precisely. At that particular time, the cesium-137 content in these particles accounts for 70 percent of its total activity.

The bottom of the canal is lined with natural soils which actively accumulate radionuclides. The latter can be passed from the sediment at the bottom into the water again under certain hydrochemical conditions, and such conditions do exist. The chemical pollution of the Donetsk Region is more than just obvious. Let us mention just the ecologically dreadful "Bermuda" triangle between Lysychansk, Severodonetsk, and Rubizhne, where people inhale large amounts of acid vapors in the air. In addition, these vapors come down over bodies of water as acid rain. In an acidified aqueous environment, radionuclides become even more aggressive and pernicious for both the flora and fauna and the people.

Prylutsky: Still, Mykhaylo Illich, what specific harm can be done by the continuous consumption of this, so to say, "Dnieper-Donbass cocktail?"

Kuzmenko: I will be somewhat more specific: regarding the "Dnieper cocktail" in general. After all, further down the Dnieper its water, to put it mildly—unfavorable water, is used not only by the Donetsk region but also by Zaporizhzhya and the Kherson area....

This is a problem not just for our Ukrainian but also world science, and by far not all of it has been ultimately explained. I would not want to scare readers with numbers yet again, but I must make certain comparisons to support these words.

In 1970 the belief was that a collective dose of one million/rem caused the death of 10 people. In 1978 the value of stochastic damage caused by this dose was revised and brought to between 100 and 125 deaths. In 1991 this dependency changed sharply. Scientists came to the conclusion that a collective dose of 1 million/rem is capable of killing between 502 and 1,740 persons. In the process, only the factor of radioactive irradiation of a person is taken into account. However, it is now known that a person "swallows" the most radiation precisely in water and food, and the most severe diseases are also due to this.

Prylutsky: However, let us go back to the Dnieper-Donbass Canal.... It follows from your words that whether the residents of that region want to or not, they

use water which is too much of a hazard to their health. However, what should actually be done in order to avert such trouble?

Kuzmenko: First of all, an accurate radioecological assessment of the canal should be made. Various ecological services, the Ministry of Environmental Protection, Health, and so on take episodic readings of radionuclides there. However, these individual efforts result in practically nothing because they do not paint an integrated picture. We should know what is going on in the ecosystem of the canal because this is precisely what forms water quality. It is important to know the quantity of radionuclides which is brought to each specific section with the water and with solid particles and how much is retained at a particular location. The locations of the highest concentration of radionuclides must be designated. If we know this, then at the next stage of research we will be able to develop and propose effective measures for improving the ecological situation in this important waterway.

Our Hydrobiology Institute is capable of performing such work. We have quite a strong community of radiation ecologists—hydroecologists, hydrobiologists, and hydrochemists. We have published several very prominent studies of these issues. They are "Radioactive Contamination of the Dnieper and Its Reservoirs After the Chernobyl AES Accident," "Hydroecological Consequences of the Chernobyl AES Accident," and others.

Prylutsky: So, what is holding you back? You are well-equipped for this....

Kuzmenko: First of all, the regions need to be interested in conducting such work. The actual master of the canal, the Ukrainian Water Management Committee, also needs to make an effort to this end. First of all, funds are needed. We even prepared an expedition along the route of the Dnieper-Donbass Canal. We put down on paper an entire detailed plan for it. However, when we embarked on carrying it out, serious financial complications developed.

Meanwhile, this is a national rather than regional problem. It should concern both the parliament of the republic and the president.

Prylutsky: Mykhaylo Illich, at the beginning of our interview you said that fish absorb a considerable amount of radionuclides. Both official fishing and outright poaching go on in the Dnieper and its bodies of water. One can frequently see how the fish, incidentally not monitored by any radiological service, are sold at marketplaces or just on the corner. Is there a risk that one will swallow an extra dose of Chernobyl woes?

Kuzmenko: Of course there is.... The point is that radionuclides are passed very easily along the so-called food chain. What does this mean? Radionuclides from the water are transferred to plankton. Nonpredatory fish eat plankton for the most part, and therefore radionuclides

are accumulated in these organisms. Predators hunt the nonpredatory species and accumulate a still higher content of radionuclides. Particularly significant quantities of radionuclides, especially cesium-137, are passed through the food chain into the muscular tissue of fish. For example, last year the cesium-137 content of a considerable number of predatory fish in the Kiev Reservoir exceeded the permissible norms established by the National Commission for Radiation Protection.

As far as the Dnieper-Donbass Canal is concerned, I believe that in this instance the situation calls for a thorough study. People who live next to the canal frequently catch fish for their consumption straight from the silt, unaware of their quality. Radiological monitoring of all of this is by all means necessary; however, extensive explanatory efforts and the ecological conditioning of the population are just as weighty.

Prylutsky: Finally, Mykhaylo Illich.... It is hard to talk about financing at present, especially as far as state support is concerned, but nonetheless: How much would carrying out your program for, say, studying the Dnieper-Donbass Canal cost?

Kuzmenko: Our society fails to understand something completely obvious: By postponing this issue until later and not wishing to know about the ecological situation in a particular region, it is already paying too much for this today—in terms of its health and the lives of our children and grandchildren. Compared to this, the outlays on the expedition we have planned are minuscule. If the survival of the nation is at stake, 100 million or even 200 million of our current coupons are worth nothing.

Hydrogen Sulfide Proposed as Alternative Energy Source

AU1507171394 Kiev NARODNA HAZETA
in Ukrainian No. 28 (159) Jul 94 p 2

[Article by Mykola Skirko and Fedir Ivanenko: "A Catastrophe or Advantage"]

[Text] We believe that electric power plants, working on hydrogen sulfide, may well be an alternative to nuclear power stations. Scientists warn that contamination of the Black Sea with hydrogen sulfides may lead to a terrible ecological catastrophe, but this detonating gas is a wonderful energy source (its burning temperature is similar to that of the best types of fuel). At hydrogen sulfide plants, it is possible to produce sulfur and ammonia, in addition to electricity.

Back in the times of the Union, this problem was studied by two very respectable commissions of the USSR Academy of Sciences and the State Committee for Science and Technology with the participation of 150 scientists and specialists, who said O.K. Before 1985, the USSR Ministry of Power Engineering was instructed to start building in the Black Sea an experimental installation utilizing deep sea hydrogen sulfide, but at that time nothing was done. The reason was usually bureaucracy.

The leaders of the Power Engineering Ministry said that they agreed to produce electric energy, but the production of sulfur, ammonia, or other by-products was not their problem, but that of the Ministry of Chemical Industry. The latter said that they agreed to produce sulfur and so on, but it was not their task to produce electricity. It never occurred to the leaders of these two Union ministries that they might join efforts. Moreover, at that time, the necessary experiments were conducted by a group of enthusiasts on a voluntary (!) basis, practically without state financing or assistance.

Today, Ukraine is an independent state, and it must resolve the problem of building electric power plants using the Black Sea hydrogen sulfide on its own and without delay, in order to reduce, as soon as possible and as much as possible, the import of gas and channel the funds for improving the people's standard of living.

It so happened that the threat of an ecological catastrophe and the inexhaustible source of energy became combined in the Black Sea Basin. In order to prevent the former, it is necessary to make use of the latter.

REGIONAL AFFAIRS

EBRD Grants DM44.4 Million for Cleanup of Baltic Sea

*AU2107154094 Hamburg DPA in German
1359 GMT 21 Jul 94*

[Text] London (DPA)—The European Bank for Reconstruction and Development (EBRD) has granted a loan of more than 44.4 million German marks [DM] for sewage treatment in the Estonian capital of Tallinn. "This is the first project with the participation of an international bank to help reduce the contamination of the Baltic Sea," stressed EBRD Director Jacques de Larosiere, according to a statement of the bank. Finland and the European Union will also help finance the project in Tallinn, which is estimated at a total of DM91.5 million.

EC Backs Dutch R&D Scheme for Environmental Technology

*BR1107105594 Brussels Rapid Database
in English 6 Jul 94*

[EC press release No. IP/94/611: "Commission Approves Subsidy Scheme for Environmental Technology"]

[Text] The Commission [EC] has raised no objections to an aid scheme from the Netherlands Government concerning a draft regulation for environmental technology grants. The regulation will replace the environmental technology promotion scheme approved by the Commission in December 1990. The present draft regulation is basically a modified continuation of the earlier scheme.

The scheme will provide for grants towards the development and initial application of environmentally friendly technologies by stimulating R & D, demonstration projects and the launching of new technologies (from the user's side) on the market. The aid programmes, which are to be published annually, are intended to encourage the development and practical application of new environmental technologies which are considerably less burdensome for the environment than the present state of technology in the Netherlands. These projects often involve high technical and financial risks for the investor. The framework should make the procedures and conditions of subsidy programmes more transparent, consistent and efficient. The framework also contains rules concerning the dissemination of the results of the projects.

Aid is given in the form of non-repayable grants to recipients comprising of firms, universities, research institutes, engineering and advisory consultancies and local authorities. The budget for 1994 amounts to approx. 15 million Dutch guilders (Million ecu 6.9)—it is established annually and is published in the Netherlands official gazette.

The Commission has examined the compatibility of the scheme with the Community's rules on state aid. In view of the scheme's objectives, which are in line with the Commission's policy on the environment, and taking into account the conditions under which aid is granted, which are in line with the state aid rules for aid for R & D and environmental protection, it considers that the scheme is unlikely to affect intra-EC trade and competition contrary to the common interest. Consequently the Commission has decided to raise no objections to the implementation of the scheme under the exception provided for in article 92 (3) (C) of the EC treaty.

EC Approves Renewable Energy, Conservation Plan in Germany

*BR1107104694 Brussels Rapid Database
in English 6 July 94*

[EC press release No. IP/69/614: "The Commission Approves an Amendment to Environmental Schemes in Germany"]

[Text] The approved scheme intends to give support to energy conservation and the use of renewable energy in Mecklenburg-Vorpommern.

Support under the scheme is given to cover cost for renewable energies (hydroelectric, wind, thermal, and solar energy, photovoltaic installations, geothermal energy and district heating power stations).

The whole scheme (lasting 2 years, for 1995 and 1996) has a total budget of 9,5 million DM (4,75 million Ecu) [European Currency Unit] each year.

All legal bodies (individuals and enterprises), except for enterprises that do not fulfil the definition of small and medium sized enterprises are eligible for support under the scheme.

Support for eligible projects will be given in the form of grants covering project costs. These include personal costs, travelling expenses and other direct costs to the project. Other costs (indirect costs) are covered at an 80 percent rate of the personal costs.

The aid intensity differs according to the sub-programmes, but may not exceed 40 percent.

The conditions of the programme have to be considered with reference to the EC [European Commission] guidelines on state aid for environmental protection (OJ C 72 from 10 March 1994). The programme concerns improvements in respect of mandatory environmental standards and falls within the scope of the guidelines.

These measures will contribute to the improvement of the environment in the eastern part of Germany without distorting trade and competition to an extent contrary to the common interest.

FRANCE

EC Tightens Dangerous Waste Laws

BR0707121094 Paris L'USINE NOUVELLE in French
7 Apr 94 p 21

[Jean-Michel Meyer report: "Waste Exports Soon To Be Outlawed"]

[Text] Waste "tourism" is about to die out. On 6 May, Community Regulation 259/93 concerning the monitoring and inspection of waste entering and leaving the EEC will enter into force. It states that waste is not just another kind of merchandise and lays down the principle whereby waste must be eliminated as close as possible to where it was produced. Armed with this principle, the EEC will have to achieve self-sufficiency in terms of waste processing resources.

The regulation allows the export of waste to developing countries—if the value of said waste can be enhanced—if there is an agreement between the two countries. However, this is a short-term concession for toxic wastes. In actual fact, the European legislative body will have to adapt its text to the Basel Convention by 1998.

In 18 months, the Western countries will have to stop exporting dangerous waste—i.e., waste which includes certain pure substances (arsenic, heavy metals, halogen, etc.)—to poor countries. This decision on controlling the movement of dangerous waste was adopted on 25 March in Geneva by the 64 signatory countries to the Basel Convention. It has been in force since 1992, and was ratified by France in 1991.

Meeting in Brussels on the same day, the EEC environment ministers lent their support to this measure. "The international community has taken a historic step," commented Chris Laub, who chaired the Geneva negotiations. So far, the elimination in developing countries of dangerous waste produced in the OECD countries has been prohibited. PCB's and other tarry residues from refining must be incinerated, dumped, subjected to physicochemical treatment within the borders of the industrialized countries.

OECD Countries Against The Wall

However, the criterion of value-enhancement will no longer justify the export of this kind of waste after 31 December 1997. The aim is to ban those transfers which, under the pretext of recycling or recovering materials, conceal dumping in the Third World. For want of adequate facilities, certain countries—such as Germany—have found the means for solving their waste problem. The OECD countries have been backed against

a wall. They generate 98 percent of the 400 million tonnes of dangerous waste produced every year on the planet, and every year almost 200 million tonnes of waste cross the borders of industrialized countries to be value-enhanced. Europe alone exports 140 million tonnes per year, worth \$20 million. Of course, dangerous waste accounts for only 1 percent of this.

However, by closing off Community borders, some countries will have to mobilize major financial resources to provide elimination facilities. What about France? "We have facilities which allow us to handle this," states Christian Desachy, sub-director of products and waste at the Environment Ministry.

Consequently, France does not export much. According to the last study carried out by the Environment Ministry in 1991, only 30,000 tonnes of waste, including 21,000 tonnes of industrial waste left the country. However, France does import. In 1991, 637,000 tonnes of industrial waste from neighboring countries arrived in France. "Many European countries envy our industrial waste processing network and send us their waste, because they know it will be processed under good conditions," Christian Desachy explained.

This is an appeal that is denounced by Greenpeace. "France is by far the country which imports the most waste," asserted Pierre-Emmanuel Neurohr, who is in charge of the anti-toxic waste campaign. In a report published in March, the ecological association estimated that 800,000 tonnes of industrial waste were processed in France in 1993. This figure is not contested by the Environment Ministry or by the customs office. According to Greenpeace, 10 percent of this tonnage entered France illegally.

The association is also calling for more stringent laws along the lines of the decree of 18 August 1992, which had a radical effect on the import of household waste, and which led to a drop from 1 million tonnes in 1991 to 30,000 tonnes in 1993.

Exporting French Know-How

Should we fear that Germany, which is already the leading exporter of waste to France, will go after the French waste industry instead of investing in facilities on German territory? "No" says the Environment Ministry. Imports will have to be covered by regional elimination plans, which will be ready in February 1996.

Nevertheless, the processing of one tonne of pesticide waste costs 30,000 francs in Germany and 1,000 francs in France. "What we need to export are our waste elimination technologies and know-how," Christian Desachy concluded.

Mitterrand Calls for Tax on Energy Utilization

BR0707115994 Paris AFP SCIENCES in French
16 Jun 94 pp 27

[Unattributed article: "National Conference on The Environment: Lukewarm Assessment Two Years After Rio"]

[Text] Paris—The second National Conference on the Environment, organized on 13 June at UNESCO by Environment Minister Michel Barnier, could only make a lukewarm assessment of the fulfillment of the commitments coming out of the Planet Earth summit held in June 1992 in Rio de Janeiro. This second conference, which was opened by President Francois Mitterrand and closed by Prime Minister Edouard Balladur, gave the government an opportunity to affirm that it had largely implemented the Rio resolutions.

Guarding against "any degree of self-satisfaction," Mr. Barnier said he believed that "more or less extensive progress had been made," but that "a great deal remained to be done." He called to mind the actions undertaken by France, including the establishment of the Committee for Sustainable Development and the decision to ratify the conventions on climatic change and biodiversity, the increase in development aid, and the French contribution to the Global Environment Fund. According to Mr. Barnier, France "is actively supporting" the current negotiations for a Convention on the fight against desertification.

Two years to the day since his speech in Rio, President Mitterrand announced that he had taken the initiative, along with Germany's Chancellor Kohl, "of writing to the heads of state of the European countries and the world's industrialized countries," with a view to sensitizing them to the "security problems" raised by Chernobyl.

Mr. Mitterrand also wondered whether the time had not come to impose "a tax on energy utilization, with a view to regulating its consumption." This would be an "economic cultural revolution, equivalent to the adoption of income tax." Reiterating that 15 million hectares of forest are disappearing every year, Mr. Mitterrand also said he wanted France to "set an example" by promoting the implementation of a Global Forestry Convention.

Beyond stating what has been done, all those participating in this one-day conference insisted on the need "to do more and do better." German Environment Minister Mr. Klaus Toepfer insisted on "the capital role" played by the Committee for Sustainable Development, of which he is the new chairman, and on the need for the developed countries to "sweep up outside their own front door," before telling others what has to be done.

Finally, Prime Minister Edouard Balladur affirmed that sustainable development was "everybody's business." "We must again call into question those means of production or consumption that involve the definitive destruction of our natural heritage, (...) but sustainable development does not clash with the need for economic growth."

The Rio summit, concluded Mr. Balladur, firstly "furthered people's awareness: The problems associated with the environment are raised at planetary level, and taking them into account makes it essential to adopt a planetary view." The report by two French deputies, Segolene Royal of the PS [Socialist Party] and Roland Nungesser of the RPR [Rally for the Republic], published on 10 June, took the view that the hope born in Rio had met with "disappointment," but that a "fresh burst of activity" was expected.

Radioactive Waste Sites Inventory Includes Military Sites

BR0707092794 Paris AFP SCIENCES in French
16 Jun 94 pp 16-17

[Unattributed report: "Military Sites in 1994 Edition of ANDRA's National Inventory of Radioactive Waste"]

[Text] Paris—For the first time, in its 1994 edition, the national inventory of radioactive waste mentions military sites. The list of 159 descriptive files comprising the inventory includes 17 military sites, which was published on 15 June by the National Agency for the Management of Radioactive Waste (ANDRA).

"By publishing this inventory," said Mr. Yves Kaluzny, the director general of ANDRA, "our Agency does not intend to substitute for the authorities directly involved at the different sites, but rather to provide the public authorities with an annually compiled document designed to serve as a useful, regular tool to aid decisionmakers."

This second edition of the list contains 159 files on sites where overall radioactivity is above 0.5 giga-Becquerels (GBq). It was drawn up primarily with the help of the Ministry of Defense, Electricite de France (EDF), the Atomic Energy Commission (AEC), the General Company for Nuclear Materials (COGEMA), and also associations like the CRIIRAD (Independent Regional Information Committee on Radioactivity) or Environment Action.

A total of 46 files are new, 17 of these being concerned with Ministry of Defense sites or branches of the AEC involved in military programs: Cestas, Cherbourg-Arsenal, Crozon-Ile Longue, Valduc, Bourges, Pont-faverger-Moronvilliers, Bruyeres-le Chatel, Arcueil-Fort de Montrouge, Saclay-INBS, Limeil, Marcoule, Cadarache, Toulon (two sites), Grenoble, Saint-Priest, and Pierrelatte.

Seven files have "disappeared" since the first edition was published in 1993. Not that these sites have ceased to exist; they have merely changed categories and now figure in the chapter entitled "other operators," which contains the list of 668 addresses corresponding to the "small producers," the overall radioactivity of whose waste falls below the fixed threshold.

The waste produced, whether of civil or military origin, comes from nuclear power stations or fuel cycle installations, laboratories, industry (e.g. gammagraphy for

examining welds, etc.), and hospitals (sources of radiotherapy). In particular, the people in charge at ANDRA want to follow very closely the return of these sources under seal to industrial or medical usage. Each year, explained Mr. Kaluzny, 2000 of these sources are distributed throughout France.

However, radioactive waste also includes lightning conductors manufactured before 1986 and made with americium or radium, or smoke detectors, made with americium.

The military waste includes both that associated with nuclear weapons and containing plutonium, and compasses with luminescent needles, tracer shells made with depleted uranium (using this metal for its mechanical, rather than its radioactive, properties), or highly varied industrial waste, including rags or gloves used to maintain boilers on board nuclear submarines, or even the radioactive sources in military hospitals.

"This inventory is certainly not exhaustive, because it is still possible to discover waste placed or abandoned somewhere several decades ago," admitted Mr. Kaluzny.

To illustrate this claim, he cited the discovery of a kind of samovar in which a radium pastille was splashed around to give the water supposedly "curative" properties, and Provarador, a feed for farm animals or poultry, doped with radium to enhance the animals' growth.

GERMANY

German Expert Criticizes Environmental Research Quality

94WS0386A Stuttgart BILD DER WISSENSCHAFT
in German Jun 94 pp 88-89

[Interview with Prof. Gotthilf Hempel by Juergen Nakott and Rainer Korbmann; date and place not given: "Much Research—Too Few Solutions: Environmental Research in West Germany Criticized by Experts"]

[Text] Science Council experts have been sharply criticizing environmental research at major research centers and universities. The chairman of the committee, Prof. Gotthilf Hempel, describes the results of the first large-scale evaluations for West German research.

BILD DER WISSENSCHAFT: Professor Hempel, everyone at the major research centers seems to be annoyed with you. Why?

Hempel: I don't know why either. I'm an ex-chairman of the Association of Major Research Institutions. So maybe many of them regard me as one of theirs who is now criticizing them. You can't understand why we say that environmental research is only one area of study at these institutions, but a more important one at smaller institutes, the so-called blue-list institutes, for example, and at the universities.

BILD DER WISSENSCHAFT: How does the environmental research situation in West Germany look to you?

Hempel: A lot of money has been poured into German environmental research over the past 20 years. Scientists have accomplished a great deal toward analyzing environment problems; in the engineering sciences they have achieved leading status internationally in analytics and purification technology. On the other hand, we have problems in the area of research that sees to it that pollutants are not generated at all in the first place, research in which avoidance strategies, for example, are sought.

We also have shortcomings in the social sciences, for example, in clarifying the relationship between man and nature, between those affected by and the causes of environment problems. Collaboration between the social and physical sciences is also underemphasized.

BILD DER WISSENSCHAFT: The Federal Republic spends about as much money on environmental research as the United States, nearly three times as much as France or Great Britain. Are the results worth the investment?

Hempel: I can't scientifically answer that question since how can the results of basic research "be evaluated"? Applied research on the environment is certainly worth the money. After all, Germany is the number-one exporter worldwide of environmental technology.

From a purely subjective standpoint, I think that we could get even more out of it with the same financial resources and the same number of research scientists. But, to do so, we have to solve those structural problems we have in the field of environmental research. And this brings us back to the major research centers, which absorb about a third of the money for environmental research.

BILD DER WISSENSCHAFT: Are they particularly inefficient?

Hempel: In our opinion, we have, on the one hand, determined that there are clearly shortcomings at the universities that are inherent in the system. We criticize the universities and yet we say that it would in many cases be best to do away with environmental research at the universities.

On the other hand, we say: Environmental research at the major research centers is excellent in many individual fields, but much of it is not typical of major research and could therefore be removed from the major research centers.

BILD DER WISSENSCHAFT: Isn't this finding a contradiction?

Hempel: Naturally, we have a problem with it. The major research institutions say: What's wrong with our doing outstanding research in an atypical manner? Isn't

that more efficient than to cut back on research in our institutions while it isn't effectively conducted at the universities?

BILD DER WISSENSCHAFT: And what do you say to that?

Hempel: We definitely need more environmental research at the universities because this is the only way ideas and results will be transferred to teaching. This is decisive for translating them into practical application.

On the other hand, we must succeed in very effectively conducting environmental research. This can be achieved only if we link research conducted outside the universities very closely with the universities through, for example, ecosystem centers, special research departments, graduate lecture series, and the like. Since the universities have major shortcomings as concerns environmental research: the short duration of their projects—on average the time it takes to do a doctoral thesis. On the other hand, the universities' high potential for innovation, which it pays to exploit for environmental research, lies in the constant flow of young researchers.

BILD DER WISSENSCHAFT: In that case, wouldn't closer collaboration between major research centers and universities be ideal?

Hempel: The centers have serious shortcomings too. The giants among them are regular science parks in which a comprehensive tie [that links the various fields of research] is often lacking. Then, too, some of the scientists come from other fields, especially nuclear research. The age structure is in part unfavorable.

BILD DER WISSENSCHAFT: Is this also true of the smaller ones?

Hempel: Not for all of them, but the GKSS [Company for the Use of Nuclear Power in Shipbuilding and Navigation] in Geesthacht is a problem for us. It is an example of the inability to close a center as soon as its mission is accomplished—which was the nuclear freighter Otto Hahn.

The GKSS' Inland Water Institute in Magdeburg was shut down—contrary to the Science Council's recommendation—after reunification. Today we think that [the researchers at] Magdeburg should have gone to the Halle/Leipzig environmental research center and other environmental research teams to the universities in Hamburg. We leave open what will become of the other half of the GKSS, which conducts research on materials.

BILD DER WISSENSCHAFT: You criticize the universities. Now what's wrong with them?

Hempel: One problem is the fact that hardly anyone in them takes an overview of the situation, especially at the large, old universities. We noted this during our visits to

them. We weren't in part shown fields like environmental law, environmental ethics, environmental economics, or environmental psychology at all.

Universities are actually ideal for environmental research because they could bring together all disciplines under one roof and allow the physical sciences to interact with the cultural, behavioral, and social sciences as well as with jurisprudence and economics. But in practice things look different.

BILD DER WISSENSCHAFT: Up to now we've considered the area of conflict involving major research and the universities. What's the situation with the other institutes?

Hempel: Research on basic problems in various environmental research fields is being conducted at some of the blue-list institutes and the Max Planck Society. The Fraunhofer institutes and the research institutes of the federal and state government departments have been energetically tackling environmental problems. The scientific quality of these efforts is, of course, very varied, but they substantially contribute to the general image of German environmental research: It is very broadly structured, efficient, well-equipped, but relatively little coordinated. It is now and then more measured than scientifically evaluated.

BILD DER WISSENSCHAFT: After reunification the entire domain of research was examined in the new federal states. Now you've done this for one field in the West. Are similar cross-sections also necessary for other fields?

Hempel: It was a toothless evaluation, since our assessment of the situation has not produced many changes in the institutions. Nevertheless, many research teams that we visited with have probably fallen victim to an assessment, as has happened in the East.

What we did was necessary. The level of efficiency is high and the discussion indicates that we are achieving results, but the cost was also very high.

BILD DER WISSENSCHAFT: You researched the subject for a year and a half. Now it took a good six months for you to publish your report. Why?

Hempel: We had hoped that we could submit the appraisal as early as in January. The federal and state governments suggested that we revise it. We did so.

BILD DER WISSENSCHAFT: Can it be that the federal and state governments do not endorse it?

Hempel: If they don't endorse it now, it will be a disaster. But we won't know that until after this interview has already been published.

Professor Hempel is the director of the Center for Tropical Marine Ecology in Bremen and of the Institute

for Baltic Research in Warnemuende. He is an environmental research scientist who, as a university lecturer, is familiar with the problems of the universities and, as director of the Wegener Institute in Bremerhaven, with the peculiarities of major research: the ideal Science Council expert, who now metes out criticism in all directions

Schroeder Discusses Nuclear Waste Disposal

AU1907111794 Hamburg DER SPIEGEL in German
18 Jul 94 p 60

[Interview with Gerhard Schroeder, minister president of Lower Saxony, by unidentified correspondent; place and date not given: "There Has Been Manipulation Before the Elections"]

[Text] SPIEGEL: Correct in principle, but politically impossible. That is how your Christian-Democrat predecessor, Ernst Albrecht, described the Gorleben nuclear waste disposal facility. Are you now going to fulfill this vision?

Schroeder: That is the ridiculous phrase used by anyone faced with this unpopular decision, even me. I am in favor of the objectives of the Gorleben movement....

SPIEGEL: The objectives against which you are now deploying the police?

Schroeder: The friendly clearance of Huettdorf was a model example of conduct by the state and of civilian opposition in a democracy. If it were possible to continue this, I would be very happy. Differences of opinion should not escalate, but I was not elected minister president in order to steer clear of conflict, but to push through the rule of law.

SPIEGEL: This time the protest is against the transportation of exhausted combustion elements in so-called Castor containers across Germany. Mounted police, helicopters, and troops are at the ready. Is this supposed to be the new dialogue with the anti-nuclear movement?

Schroeder: No one can guarantee that it will remain peaceful. I cannot and will not lead any Lower Saxon police officer into a situation of personal danger.

SPIEGEL: When will the first Castor container leave Philippsburg? Minister for Reactor Safety Klaus Toepfer says that the nuclear facility operators have a firm right to this transport.

Schroeder: We doubt that. The so-called provisional rule concerning nuclear waste dates from 1983, at a time when the laender governments had a different composition. No one has taken advantage of this rule for 10 years. If the operators suddenly want to do so now, without giving the land an opportunity to re-examine it, that would be an abuse of the law.

SPIEGEL: Must the courts be involved yet again?

Schroeder: Yes. Even the operators of the Philippsburg facility claim that there is no need for such a transport right now. There has obviously been some political manipulation before the election.

SPIEGEL: Could you provide some facts?

Schroeder: Yes. The authority that approves these transports, the Federal Office for Radiation Safety, is answerable to Minister Toepfer. Our environment minister Monika Griefhahn has still to issue an opinion on the necessary reports that we have not even received yet. We are not convinced that the radiation emanating from the combustion elements has been measured correctly. Equipment has broken down, therefore we are going to have to rely on external opinions.

SPIEGEL: That sounds like delaying tactics.

Schroeder: In the interests of the Lower Saxon population, I have to be very careful that the acceptable lower limit of radiation is adhered to.

SPIEGEL: If the preliminary storage facility for exhausted fuel elements at Gorleben goes into operation, you will announce your participation in further talks on an energy consensus between the electricity producers, political parties, and trade unions. Why is this? A preliminary paper produced by the talks does call for the preliminary storage of this waste.

Schroeder: Yes, but this involves major conditions for a controlled abolition of nuclear energy over the next few decades. Not until a dateline for the shutdown of all nuclear plants has been fixed does one know how much nuclear waste there is to dispose of.

SPIEGEL: The operators obviously will not hear of the abolition of nuclear energy?

Schroeder: If some of the energy producers want to spoil the entire concept, then I want to have nothing to do with their actions. I thought I was dealing with forthright interlocutors. I seem to have been mistaken.

SPIEGEL: What do the other nuclear operators want?

Schroeder: For instance, we have rational working relationships with Preussen-Elektra, even if they have a different opinion of nuclear energy. They have accepted the fact that investments in nuclear energy have no significant future. We talk to them about gas-fired power stations, coal imports, energy savings, and wind energy. They want to invest their money profitably, and they should be able to do so in our country.

SPIEGEL: The rules in force until now on the subject of nuclear waste disposal are supposed to be amended by means of a law. For the first time, it will be sufficient to show that there is a preliminary disposal facility for nuclear waste. The law has already gone through the Bundestag.

Schroeder: That is against our will. I wrote a letter to President Herzog and, with all due respect for his office, explained our arguments. Contrary to a motion from Lower Saxony, the Christian-Liberal ruling majority refused to make the law dependent on the Bundesrat's approval.

SPIEGEL: That is because the Social Democratic Party of Germany-governed laender have a majority in the Bundesrat. So Herzog does not want to sign one of the first laws to be passed during his tenure?

Schroeder: That is right. We have widespread reservations about the law. Lower Saxony will petition the Constitutional Court to have the law reexamined if it does enter into effect. I can see from the resolutions of the Constitutional Court's Second Chamber on similar issues that there are good chances of this.

SPIEGEL: Industry is referring to agreements, valid under international law, about the transfer of nuclear waste from foreign processing plants to Gorleben.

Schroeder: We cannot bypass that. It will be necessary to dispose of this waste in Germany. Lower Saxony will have to contribute to this. We are prepared to offer a disposal facility, and then the other laender should follow suit. But Lower Saxony is not going to become Germany's nuclear toilet. Anyone who tries to cheat us will not get far.

SPIEGEL: Is there going to be a preliminary storage facility at Gorleben or not?

Schroeder: I do not think we should offer such a thing. Once the possibility of storing the waste in one of the old shafts of the iron mine at Salzgitter has been checked, I do not see why people should bother us.

SPIEGEL: Where should the nuclear waste go?

Schroeder: The burden has to be shared. No one has said that the keenest supporters of nuclear energy in Bavaria are not prepared to install a disposal facility, or that Harald B. Schaefer, the famous nuclear energy critic and environmental minister in Stuttgart, is not prepared to cooperate in this.

SPIEGEL: According to the resolution of the SPD Nuremberg party congress of 1986, the SPD wants to close down all nuclear reactors within two years.

Schroeder: That is merely a wish, and not reality. It will take another 30 years for the entire energy sphere to be converted. The SPD should not only say what it wants to eliminate, it should also say what it wants to implement.

SPIEGEL: As a member of the Young Socialists, you demonstrated in Gorleben in 1980.

Schroeder: Yes. I am acquainted with many people from the anti-nuclear movement. I have even defended some of them in court. It is painful that they cannot or will not make distinctions.

Lack of Infrastructure Hampers Use of Natural Gas as Motor Fuel

94WN0317C Duesseldorf VDI NACHRICHTEN
in German No 22, 3 Jun 94 p 28

[Article by Rudolf Weber: "Problems Filling up With Natural Gas"]

[Text] Salzburg—Natural gas is already being used as a motor fuel in Italy and some overseas countries, but it is recently being discussed in Central Europe as well because of the much lower emissions. However, there are no reliable filling stations, which can cope with large amounts of gas and high pressures. The Swiss Sulzer group has now designed a natural gas pump with electronic filling control and safe valves.

Natural gas as automobile fuel is nothing new. After World War II it was popular in Italy, and in the 1970s it was introduced on a broad basis in New Zealand with government support. Worldwide, more than 800,000 cars, mostly freight vehicles, drive with NGV or Natural Gas for Vehicles. From the aspect of engine technology there are no problems, and switching while driving to gasoline or diesel after using up the natural gas supply on board has long since been solved. The concentration on transportation vehicles is explained by the circumstance that tanks consist of heavy pressurized steel bottles, whose weight and volume present an unfavorable ratio to the vehicle mass and size for passenger cars.

But another technical problem needs to be solved, if natural gas is to be introduced on a broad front. Today's gas pumps do not offer the safety and reliability which must be demanded to protect the car drivers' health and wallet: Safety valves often stick when cold, because in narrow passages methane hydrate crystals form from the natural gas, which consists predominantly of methane, and the quantity indicator for which one pays deviates up to several percent from the actual value. Furthermore, NGV pumps are expensive to buy.

Unlike for the liquid fuels gasoline and diesel, which are pumped under very low pressure from the storage tank into the vehicle's tank, NGV is under 200 bar and more, meaning under high pressure (in the professional world one therefore also talks about CNG or Compressed Natural Gas). And measuring the amount of rapidly flowing gas with great accuracy is incomparably much more difficult than for liquid fuels. Based on this situation, it was decided in 1991 by the Swiss Sulzer group to design a safe and reliable pump. It is not coincidental that this decision was made in Switzerland, because the group has for a long time sold compressors for natural gas technology, and group subsidiary Maschinenfabrik Sulzer-Burckhardt, Basel, has produced from a New Zealand pattern nearly one-fifth of all the NGV pumps operated in the world.

However, in this project, for which the National Energy Research Fund (NEFF) of the Swiss energy industry assumed half of the cost of approximately 500,000 Swiss

frances, it was possible to build on the firm's own research experience and one knew where to tackle it, that is to say first the measuring process, and, second, the electronic control. For this reason the experienced control expert Heinz Mutter was chosen as the project leader. His first consideration concerned the measurement principle: Volume or mass flow measurement? Natural gas can vary in density by several percent depending on the source, which makes indirect mass and volume measurement more difficult. There only remained direct mass measurement, which is also preferred by the weights and measures bureaus of all NGV countries, because mass measuring equipment can be tested very accurately by weighing gas-filled containers.

But the selection of accurate mass measurement methods for gases, particularly with the large flow that is necessary, is anything but large. Control expert Mutter finally decided in favor of measurement based on the Coriolis principle, because it is independent of the material properties, above all the density. But since the Coriolis measuring equipment is in principle too expensive, the search for a measurement method that combines precision and reliability, is once again under way.

A practical test with high gas flow pressure also revealed another weak point in the cars: The pipe between the filler hole and the vehicle tank is generally too narrow for rapid filling, because it is intended for slow pumping. Assuming that the remaining difficulties will soon be mastered by Sulzer or someone else, would this clear the path for NGV as fuel? The Laboratory for Combustion Engines and Combustion Technology (LVV) at the Confederate Institute of Technology in Zurich judges the prospects quite soberly in a report for the Swiss National Energy Research Fund: "Compressed natural gas as an alternative to gasoline is appealing due to the nearly 20 percent lower CO₂ emissions and the clearly lower ozone-relevant reactivity of the hydrocarbon emissions."

But as long as no CO₂ tax, price advantages—such as tank size, etc.—or government regulations favor the gas, the potential as a gasoline alternative is not equally great. The laboratory further says that the very low emission values, particularly for soot, and lower noise production make compressed natural gas attractive above all in buses.

Electronic Scrap Volume Reduced by Better Planning

94WN0317B Duesseldorf VDI NACHRICHTEN
in German No 22, 3 Jun 94 p 28

[Article by Egbert Roehm and Manfred Biermann: "Optimized Logistics Instead of Automatic Disassembly"]

[Text] Essen—According to prognoses by the Central Association of the Electrical Engineering and Electronics Industry (ZVEI), Frankfurt, in 1994 there will be about 1.5 million tons of obsolete electrical and electronic

equipment in the old laender alone. The Essen subsidiary of R+T Entsorgung GmbH is therefore building a recycling facility with the character of a pilot plant located in Essen. Beginning in mid-1994, each hour one ton of old equipment will be disassembled and mechanically reprocessed.

R+T Entsorgung wants to take over the environmentally correct recycling of old equipment as a partner of municipalities, business and industry. "We do not want to limit ourselves to certain products, but recycle each piece of equipment which is delivered to us," says Dr. Koenig, who is in charge of the development of promising recycling concepts at the Essen recycling company. In view of the variety of different equipment, the recycling expert cannot hope to be able to use robots for the disassembly. "In order to be competitive, we must instead worry about the flow of materials," according to Koenig. "We avoid unnecessary costs primarily by reducing handling of the equipment to the minimum necessary."

The logistics of disassembly thus decide the profitability of the entire plant. With this in mind, the machine tool laboratory (WZL) at the Rhine-Westphalian Institute of Technology in Aachen, headed by engineering professor Walter Eversheim, has developed a concept to dismantle obsolete electrical and electronic equipment. The objective consists of embedding the disassembly into the industrial environment at the site in Essen, optimizing the flow of material, and utilizing an existing factory building as efficiently as possible. A model of the facility could be seen from 18 to 21 May at the trade fair for recycling and waste disposal, Entsorga 94, in Cologne.

Due to the variety of equipment to be disassembled, automating the dismantling process is not in the foreground of the new WZL concept, but instead integration of the disassembly processes into the flow of material. Both the handling of the equipment and the sorting and transportation of the resulting categories of residue must be implemented at the lowest cost possible. Fluctuations in the composition of the product mix must not lead to the result that optimal utilization of the disassembly is no longer possible because of specialization on certain products.

How the disassembly functions within the recycling chain can be demonstrated by means of television sets. A statistical evaluation of disassembled television sets at R+T Entsorgung resulted in the following composition for the residual material categories: A television set weighs 28 kilograms on average. Of that 45.5 percent is glass, 13.5 percent wood, 8.1 percent plastic and 1 percent condensers.

The necessary disassembly capacity must be derived from the product mix. This requires an evaluation of the duration of disassembly. The dismantling of a washing machine, for example, takes about five minutes. After removing all necessary components, the rest of the equipment weighs about 50 kilograms. In order to supply

the shredder with one ton of material, 20 machines an hour must therefore be taken apart.

Designing the work stations followed the principle that the flow of material of the various residual material categories should be separated immediately, in order to avoid later resorting. For this purpose all work stations have sufficient disposal areas for wire boxes or containers in which the categories are collected.

Delivery of old equipment for disassembly takes place principally through municipal collection points in some cities in the Ruhr area. Additional deliveries come from companies in the electronics industry, which cooperate with the Essen people in recycling their old equipment. It is learned from experience so far that the bulk of the deliveries must be dealt with each day in the early afternoon. For the logistical concept of the disassembly facility, this results in the conclusion that it is necessary to have the corresponding storage capacities before disassembly. The requirement that equipment handling must be minimized here leads to an integration of the functions of transportation and storage. As a means of transportation and supplying the work stations, roller conveyors are selected, which simultaneously take over the function of intermediate storage.

After selecting the suitable collection containers, the frequency and means of transportation are reported. It turns out that for all categories except the residue of the equipment, the transportation can be handled with forklift trucks because it is so infrequent.

The residue from the equipment, which is to be shredded, represents the largest flow of material. As a rule, disassembly of the equipment is destructive, since the equipment residue no longer has any economical use. The recommended means of transportation to the shredder is therefore a conveyor belt. In order to achieve the most efficient material separation possible for the shredded material, it is necessary to form batches in order to feed the shredder. For this purpose an interim storage area was established as a buffer between disassembly and shredder, from which the shredder is fed independently from the disassembly.

Work stations and means of transportation were arranged within the factory hall in such a way that the material flows from equipment intake to the shredder. This is necessary for reasons of overview, in order to assure a smooth operation.

The development of the layout further takes into account the number of work stations needed as well as the space needed for the sorting containers for the remaining material categories. Routes were designed within the hall in such a way that each work station can be reached with a forklift truck. On the one hand, this makes transportation of the residual materials possible and, on the other, assures accessibility to the work stations for reasons of work station safety. This arrangement also expands the flexibility reserves of the disassembly,

because in this way large equipment, which the conveyor belts are not designed to carry, can also reach the dismantling stations.

From today's point of view the disassembly plant still has the character of a pilot plant, however, since the volume of disassembly before the mechanical reprocessing depends on legal environmental protection regulations and the possibilities of future recycling of equipment components under economical framework conditions. Thus, all predictions regarding the necessary disassembly capacity must be regarded as preliminary. In order to avoid unnecessarily high risk, the investment amount must therefore be minimized. This is possible since, among other reasons, it is based on the establishment of a stepwise concept in which a functioning disassembly can already be set up at an early expansion stage.

Early Warning Device Developed for Water, Soil Contamination

94WS0390A Frankfurt/Main FRANKFURTER
ZEITUNG/BLICK DURCH DIE WIRTSCHAFT
in German 3 Jun 94 p 8

[Unattributed article: "Laser Sensor Detects Surge in Contamination: Kiel Device Can Be Used as an Early Warning System"]

[Text] Frankfurt—In the event of environmental accidents, the extent of contamination of water and soil must be determined as quickly as possible. Kiel University has developed a fiber optic laser sensor for this purpose. It is reportedly particularly suited to the detection of mineral oil-hydrocarbons, which are released during tanker accidents or from leaky oil tanks. However, other toxic aromatics could also be measured.

The measurement principle of the device is the excited fluorescence of hydrocarbons. For the practical measurement, the detector head connected to a quartz optical fiber is inserted into a water or soil sample. Excitation is carried out with laser pulses of an excimer laser, which are conducted into the sample through the optical fiber.

The fluorescent signal is guided through another optical fiber to the detection electronics. This includes, among other things, an amplifier and a photon counter, report the Kiel researchers (Institute for Experimental Physics, Kiel University, Olshausestrasse 40, 24098 Kiel).

A major problem of fluorescent measurement processes is the fluorescence of organic substances naturally present in water or soil. However, this fluorescence subsides more rapidly than the fluorescent signal from pollutants. By a time-triggered measurement, the measurement electronics suppress these interfering signals.

The strength of the prolonged fluorescence is the measure of the concentration of the hydrocarbon compound. The special advantage of the Kiel measurement system

lies in its direct electronic analysis (on-line measurement). The results are available virtually immediately, and it is possible to forgo sample collection and preparation.

Thus the system is reportedly suitable as an early warning system in the event of environmental accidents. The detector heads could be permanently installed at particularly high-risk locations in soils or in the sewer system and could immediately signal a pollutant surge. In addition to hydrocarbons, heavy metals can also be detected.

Controversy Over Transport of Radioactive Waste Continues

AU2107072894 Hamburg DPA in German
1637 GMT 20 Jul 94

[Text] Hanover/Dannenberg—The tug-of-war over the first transport of radioactive nuclear waste to the intermediate disposal site in Gorleben continues. The company that operates the disposal site told DPA today that an application for the transport of the Castor container from the Philippsburg nuclear power plant (Baden-Wuerttemberg) will be submitted to the Environment Ministry in Hanover before the end of this week.

Whereas protests by antinuclear activists continued in the affected region of Gorleben, the provincial government proceeds from the premise that the container will not be transported to Gorleben before September because of problems concerning police protection due to summer leave. According to Interior Ministry Spokesman Volker Benke, different statements by the operators of the Philippsburg nuclear power plant on the timetable do not change anything.

The container was removed from the safety zone of the reactor in Philippsburg yesterday evening and loaded onto a freight car. Final measurements of the container were carried out to complete the examination protocols, the Gorleben Fuel Element Storage Society (BLG) stated.

The Environment Ministry in Hanover failed to specify today how much time will be required for checking the transport documents and the measured data. Whether this will take two weeks or longer can only be determined once the data are available. If Lower Saxony should refuse to permit the transport of the first Castor container to Gorleben, the Federal Environment Ministry might issue a directive.

About 200 antinuclear activists undermined tracks in Dannenberg near the loading station for Castor containers this morning. It was reported that they succeeded in removing ballast from beneath 28 cross ties, to saw apart one cross tie, and to erect barricades with wood without the police noticing anything. Unimpeded, the demonstrators then disappeared again in the antinuclear village "Castornix" near the Gorleben disposal site. Kurt-Dieter Grill (Christian Democratic Union), who is

responsible for environmental policy, called on the Hanover government lead by the Social Democratic Party of Germany not to tolerate such violations of the law any longer without interfering.

Environment Minister Toepfer Presents 1992-93 Report

AU0807162694 Munich SUEDEDEUTSCHE ZEITUNG
in German 7 Jul 94 p 5

["Froe" report: "More Cargo Traffic on the Roads"]

[Text] Bonn—The increasing cargo traffic on the roads is ruining the progress made in individual traffic. As FRG Environment Minister Klaus Toepfer (Christian Democratic Union) and Heinrich von Lersner, president of the Federal Environment Office, stated at the presentation of the "Data on the Environment 1992-93" environmental report in Bonn, the emission of nitric oxides declined by a total of four percent between 1987 and 1993. However, the decline in individual traffic by 1.07 million tonnes in 1987 to 806,000 tonnes in 1993 was set off by an increase in cargo traffic on roads from 520,000 to 773,000 tonnes. According to Toepfer, the improvements achieved by vehicles with catalytic converters are set off by the increasing truck traffic. Lersner pointed out that 72 percent of domestic cargo traffic in the GDR took place on rails. In the united Germany, however, this is true for less than 20 percent. The trend continues to go down. As a consequence, both men demanded shifting cargo traffic to the rails. Nitric oxides are one of the reasons for the dying of forests as well as for the development of ozone close to the ground and thus for summer smog.

The 700-page report critically notes that, despite more modern engines, the average consumption of fuel by vehicles has been reduced only from 10.7 to 9.9 liters per 100 km over the past 10 years because of higher speeds. Toepfer announced that during Germany's presidency in the European Union [EU] he will advocate a reduction of the benzine content in gasoline to 1 percent. This would lead to a reduction of benzine emissions by cars by about 40 percent. If the EU does not agree to that, Toepfer does not rule out national solo action. The price of gasoline would thus rise by one to two pfennigs per liter.

According to the report by the Federal Environment Office, pollution in the new laender has clearly declined. Thus, energy-related emissions of carbon dioxide declined by 48.4 percent to 178 million tonnes between 1987 and 1993. Sulfur dioxide emissions were reduced by 34.5 percent to 3.55 million tonnes. The amount of quicksilver in the Elbe River went down from 28 tonnes in 1985 to 1.9 tonnes in 1993. As reasons for the improvement Toepfer cited the collapse of the large GDR industries, but also billions in investment.

As a result of the clearly higher quota of reports, the overall number of registered environmental crimes

This report contains information which is or may be copyrighted in a number of countries. Therefore, copying and/or further dissemination of the report is expressly prohibited without obtaining the permission of the copyright owner(s).

almost doubled in the old laender from 12,875 to 24,328 between 1985 and 1993. In eastern Germany 5,407 offenses were registered last year, which is twice as many as in 1992.

Bonn, Hanover Quarrel Over Nuclear Waste Shipments

AU0907141194 Berlin DIE WELT in German
8 Jul 94 p 2

[Unattributed report: "Bonn and Hanover Quarrel over Nuclear Waste Shipment"]

[Text] Hanover/Bonn—A few days before the planned shipment of nuclear waste from the Philippsburg (Baden-Wuerttemberg) nuclear power station to the intermediate storage facility in Gorleben (Lower Saxony), a heated controversy has broken out between the FRG Environment Ministry and the Lower Saxony Land Government. Minister President Gerhard Schroeder and Environment Minister Monika Griefahn (both Social Democratic Party of Germany) warned of serious consequences for future talks on the energy consensus, if these shipments are implemented by force.

The delivery is completely superfluous and obviously only serves to "fan the mood before the Bundestag elections," Schroeder told NEUE OSNABRUECKER ZEITUNG. Toepfer and the energy industry will "lose an interlocutor if they continue with this provocation."

FRG Environment Minister Klaus Toepfer (Christian Democratic Union) rejected the accusations. The shipments, like the storage in Gorleben, are legal. He called on the people to respect intermediate storage. The transportation of used fuel elements is routine and satisfies the highest demands for safety.

Citizens' initiatives have announced tough resistance to these shipments. Already during the night to Thursday [7 July] several anti-nuclear activists protested against the undertaking with road barriers and bomb mock-ups.

Originally, the shipment was planned for next week. It would be the first intermediate storage of nuclear waste in Gorleben.

Lag Noted in Enforcement of R-Value Ordinance

94WN0317D Duesseldorf VDI NACHRICHTEN
in German No 22, 3 Jun 94 p 31

[Unattributed article: "Heat Protection Ordinance Still not Far-Reaching Enough"]

[Text] Duesseldorf—Vacuum-coated window glass which reflects room heat, but on the other hand allows solar heat unhindered into the house, could make a major contribution to saving heat energy. The thermal transmission value of such a window design is even lower than what is mandated by the imminent Heat Protection Ordinance.

With the second amendment to the Heat Protection Ordinance (WSVO), thermal energy consumption is to be further limited as of 1 January 1995. Glass coating expert Dr. Christian Schaefer, who heads the glass coating product division at Leybold AG in Hanau, is convinced that "all the technically and financially, almost cost-neutral, possibilities have not yet been presented by far." He directs his attention to windows.

At what has so far been the weak point of the system of construction physics, heat losses occur through conduction, convection and radiation. With insulating glass, that is to say two panes with an insulating space in between, conduction and convection are already significantly reduced. The radiation losses, on the other hand, remain almost unchanged.

"This is what vacuum coating is specifically targeted at," Schaefer explains. In fact, the reduction of the overall heat transmission, compared to uncoated insulating glass, is between 65 and 84 percent, depending on the window's orientation. This corresponds to a reduction of the R-value from 3.2 W/m²K to below 1.3 W/m²K. This value is better than that of the wood or plastic frame, which holds the glass, Schaefer stresses.

Converted into energy savings for an average single-family home under German weather conditions, the result, according to Leybold's calculations, is 15 liters of heating oil per square meter of window surface. With a glass surface of 30 m², that is 450 liters annually. Compared with simple coated windows, the savings increase to about 1,200 liters. In addition, the gain in solar energy must also be taken into account.

"In its present version the amended WSVO stipulates limits which do not exhaust the existing possibilities," Schaefer complains. In fact, according to the WSVO, insulated glasses with R-values of 1.7 may still be used after 1995 as well. Such values are achieved by pyrolytically coated glass, for example, says Leybold's expert. In comparison with the vacuum-coated panes, however, a savings potential of 33 to 60 percent reduction in heat transmission is wasted.

Technically and economically it is no problem to convert and to meet the requirement, Schaefer stresses. Plants with a coating capacity of about 30 million m²/year would have to be available in Germany. About half of them have already been in place for a long time. To this would be added a capacity of 13 million m²/year in the surrounding countries, for example in Switzerland, Luxembourg and France.

And the expansion continues: "We are proud that we have taken into operation the most modern plant of its kind," is how Hans Schmitz, head of marketing-communication at VEGLA GmbH, Aachen, comments on the development. Its subsidiary, Giag GmbH, has just opened up a corresponding plant in Torgau, Saxony.

New Waste Disposal Process Reduces Dump Site Opposition

94WN0317A Duesseldorf VDI NACHRICHTEN
in German No 22, 3 Jun 94 p 6

[Article by Christa Friedl: "Waste Disposal Firms Looking for Sites"]

[Text] Duesseldorf—What do Marienfelde, Fuerth and Ludwigshafen have in common? Their garbage problem. But not only that—at these sites the first facilities for energy-saving and low-emission waste carbonization could sooner or later be reality. A race for the locations has erupted between Alba/Thermoselect, Siemens KWU and the Noell group.

Increasingly more municipalities in Germany only have dumping sites left for a few years. At the same time, with the ever-present protests from the political world and the public, conventional waste incineration facilities are not being approved within acceptable time frames. So it is no wonder "that the municipalities grasp at anything that is not called waste incineration," according to Dr. Holger Brackemann of the Federal Environment Office in Berlin. And of these alternatives there are now three that are about to enter the market.

First of all, Thermoselect. This technology, tested in Italy, from the company with the same name headquartered in Fondotoce, about a year ago kindled a discussion about alternative, thermal, waste disposal methods. As the German answer to it Siemens KWU, Erlangen, presented its carbonization method developed and tested over 12 years. And Noell Abfall und Energietechnik of Wuerzburg used the Entsorga trade fair in May in Cologne to bring its conversion method into the debate.

Common to all three is that they have rediscovered the old principle of waste carbonization (pyrolysis). The advantage of pyrolysis as compared to conventional incineration is that it converts the organic parts of the waste into energy-rich hydrocarbons, oils and cokes. In this process the garbage is exposed to temperatures of between 300° and 450° in a drum with the air extracted. The resulting reaction products can then be further used as fuel. However, in the early 1980's pyrolysis failed as a technology for waste disposal, because a great many unknown, partly toxic, materials formed during the process.

Thermoselect, the carbonization-incineration technology and the conversion process solve this problem by coupling the pyrolysis with a high-temperature step, which utilizes the energy of the pyrolysis products and in so doing safely destroys the toxic substances contained in them. Furthermore, at the end glass, rocks and metals are left behind in largely reusable form.

The allocation of the sites is in full swing. At this time KWU, which in May obtained approval for a carbonization-incineration facility (SBA) in Fuerth, has the lead.

Plans call for the plant to dispose of 100,000 tons of residential waste annually beginning in 1997. Ludwigshafen, Moenchengladbach and Steinfurt have also decided in favor of building an SBA, according to KWU.

The Berlin waste disposal enterprise Alba, which holds the Thermoselect license and operating rights for Berlin and the eastern laender, expects approval "in the next few weeks" for a plant in Marienfelde that disposes of both sewage sludge and household garbage. According to Alba, negotiations are under way with Saxony-Anhalt, Saxony and Brandenburg as well.

Noell wants to initiate approval of the first conversion facility located in Lower Saxony in the next few weeks and begin operation in 1997. Two additional plants are being discussed, according to information from the firm.

It is likely that waste disposal will become cheaper with the alternative methods. Thus—according to information from each manufacturer—an SBA with a 150,000 ton per year capacity costs about 260 German marks [DM], a comparable Thermoselect facility DM 220 million and a conversion plant for 100,000 tons DM 270 million. Faced with these amounts, it is easy to see who the losers of the competition are: Those who offer conventional incineration technology. An example of this was mentioned at Entsorga by the managing director of Alba, Dr. Peter Dierkes. At Marienfelde the firm offering the originally planned fluidized bed combustion plant had worked it out to be DM 1.4 billion. Just how much extra room this calculation contained was indicated during the course of the negotiations, according to Dierkes, after the Thermoselect method entered the competition. "Suddenly, the same facility cost only DM 970 million."

Minister Says Nuclear Waste Shipment to Gorleben Postponed

AU1507104694 Hamburg DPA in German
0921 GMT 15 Jul 94

[Text] Hannover (DPA)—The planned transport of nuclear waste from the Philippsburg (Baden-Wuerttemberg) nuclear power plant to the interim storage facility in Gorleben will not take place for the time being. On Friday [15 July] the Interior Ministry in Hannover announced that, following talks with the Nuclear Service Company (GNS/Essen), which is responsible for the transport, it is to be assumed that "it is quite certain that no transport will take place" during the vacations, which start next week, until the end of August.

Interior Minister Gerhard Glogowski (Social Democratic Party of Germany) has appealed to the reason of the GNS, because it is more difficult to secure a transport during the vacations. Ministry Spokesman Volker Benke said. Many policemen have asked for leave. In addition, one has to expect far more children and young people among the antinuclear activists in Gorleben.

Furthermore, there were obviously also technical problems in connection with loading the so-called Castor container in Philippsburg.

IRELAND

Environment Minister Tells Survey Results

94WN0348 Dublin IRISH INDEPENDENT in English
21 Jun 94 Supplement p 5

[Text] Continuing reduction in "serious" pollution but a disappointing increase in "slight" and "moderate" pollution was highlighted by Minister for Environmental Protection John Browne at the annual Pig Health Society symposium on Friday.

"The main threats identified were sewage discharges at certain locations and agricultural nutrient inputs on a widespread basis," he told the meeting, which was held in conjunction with the Ballyjamesduff Pork Festival.

Irish rivers and lakes are generally of high quality, supporting diverse fish life and fauna, he reported.

The latest report for the period 1987 to 1990 showed that, of 12,700km of river channel surveyed, 77.5 percent was unpolluted, 12 percent was slightly polluted, 9.5 percent was moderately polluted and only 1 percent was seriously polluted.

One in eight lakes surveyed showed significant pollution.

ITALY

Report: Italy 'Unprepared' for Environmental Challenges

BR1307072594 Rome ANSAMAIL Database in English
1236 GMT 12 Jul 94

[Unattributed article: "Environment: Italy Unprepared for Future, Report Claims"]

[Text] (ANSA) Rome, July 12—Italy is almost totally unprepared for the environmental challenges, and the related ones such as for employment, it must face in the future, according to the sixth edition of the Legambiente report, "Environment Italy '94".

The report made an interdisciplinary examination on the economy, industry, technological innovation and employment and found that Italy was sufficient in only two out of seventeen points, the green house effect and energy saving, while Milan ranked one of the most "anti-environmental" cities in the industrialized world.

The report was put together by Giulio Conte, Giovanna Melandri and Legambiente chairman Ermete Realacci and was pre-released here on Tuesday [12 July].

"The environment is at the crossroads of building the future", Realacci said in his introduction of the report, "but the Italy of [Prime Ministers] Ciampi and Berlusconi

is seriously behind. It was not by chance that we chose to wait until after the G-7 summit to present the report given that the problems of the environment are evermore pan-national and reveal the need for an ecological conversion of the economy to overcome the crisis".

In its conclusions, the Legambiente argued that Italy was unprepared to deal with current and future environmental crises because of the strong lobbies of the most obsolete areas of the economy—construction, chemicals, steel—and due to structural shortcomings which hinder technological innovation.

Evidence of this latter aspect, the report said, was that only 311 "high-tech" patents were registered in 1991, much lower than the average of other industrialized countries and even lower than China, Korea, Brazil and India.

In one of its few good areas, Italy was among the OECD nations which consumed less energy and produced less carbon dioxide per inhabitant: 7 [metric] tons per year compared to 10 in Britain, 13 for Germany, 20 in the United States. Per capita consumption of electricity was put at 3,750 kW hours compared to the European Union average of 4,700, 5,700 in Germany and 10,800 in the United States, and during the 1981-91 period recorded the lowest increase in electricity consumption.

On the more ample negative side, the Legambiente report underscored that Italy was at the bottom of the list in the area of transport, with more than 90 percent of freight travelling by road as opposed to 80 percent in France and Germany.

The state of Italy's water resources was also listed as poor, especially seashores, rivers and lakes. The most evident cause of this, the report said, was the chronic inefficiency of waste treatment facilities which cannot even service 50 percent of the population, as opposed to the 60 percent treated in France, 80 in Britain and 90 percent in the United States.

Negative evaluations were also given in the area of special and hazardous wastes, with Sicily, Campania, Emilia Romagna, Lombardy and Tuscany producing significantly more than they are capable of treating.

Looking at the urban question, the Legambiente put Milan in the crisis column, with only 3 square meters of open green space per resident, a far cry from the 100sq.m in Stockholm, 30sq.m in Berlin, Prague and Copenhagen, 20 in Zurich and Amsterdam, Vienna with 15 and Paris with 13sq.m per resident.

Milan also topped the list for water consumption, or waste, with 600 liters per inhabitant, compared to 530 in Prague, 450 in Sofia, 530 in Zurich, 400 in Odessa and 150 in Brussels and 100 in Paris.

For solid urban waste, Milan was second only to Paris, 530 kg, against 580 kg per resident in the French capital.

This report contains information which is or may be copyrighted in a number of countries. Therefore, copying and/or further dissemination of the report is expressly prohibited without obtaining the permission of the copyright owner(s).

LUXEMBOURG

EU To Tighten Ozone-Unfriendly Gas Controls

BR0707120194 Paris AFP SCIENCES in French
16 Jun 94 p 28

[Unattributed report: "More Stringent EU Control Of Ozone- Layer-Destroying Gases"]

[Text] Luxembourg—On 9 June in Luxembourg, the environment ministers of the European Union agreed to a number of measures to enhance monitoring of the production and circulation of substances which destroy the ozone layer.

Last December, the ministers agreed to limit the consumption of HCFC (hydrochlorofluorocarbon) gases—which are substitutes for CFC's (to be prohibited as of 1 January 1995 in the Union) used in refrigerators, fire extinguisher, and some solvents.

This limitation was accompanied by a timetable for gradual reduction, leading to the complete elimination of HCFC's by 2015. In the meantime, however, since certain companies fear there will be a shortage of CFC substitutes, they have imported massive amounts of recycled CFC's which sometimes come from outside the Community.

During a recent routine check of a carrier in Germany, it became apparent that the recycled CFC's he was transporting to France from one of the countries of the former USSR had not been recycled but were actually virgin products bearing a fake certificate attesting to be recycled products, a German diplomatic source revealed.

To prevent this type of fraud, the ministers—at the request of the German, Netherlands, and Danish delegations—agreed to demand exporters of recycled gases to have certificates guaranteeing the nature of the products. They also made provisions for each member state of the Union to issue import licenses to users of recycled CFC's in the Community. Similarly, the European Commission was given the task of more strictly monitoring businesses which produce and re-process these kinds of substances.

The French company Atochem is currently the main European company producing HCFC's. CFC producers Hoechst (Germany) and Solvay (Belgium) have stopped or are on the verge of stopping their production.

NORWAY

Study Examines Undersea Dumping of Carbon Dioxide Emissions

MM2107135094 Oslo AFTENPOSTEN in Norwegian
18 Jul 94 p 3

[Report by Per Kristian Bjorkeng: "Gas Could Be Stored Under the Seabed"]

[Text] Trondheim—Around 100 years of carbon dioxide emissions from the biggest sources of emissions in Europe could be stored under the seabed.

The Norwegian continental shelf could become a gigantic undersea "waste dump" for European gas emissions. By pumping carbon dioxide emissions from major industrial emission sources down under the continental shelf Europe could store at least 100 years of emissions from the biggest industrial emission sources. The seabed is impermeable enough to keep the carbon dioxide gas under water for tens of thousands of years. The Norwegian continental shelf has the largest storage potential for this greenhouse gas.

This emerges from an interim report produced by SINTEF [Society for Industrial and Technical Research] in collaboration with a number of other European research institutes at the request of the EU [European Union] Commission. The EU wants to find methods of reducing emissions into the atmosphere without cutting back on activities which produce carbon dioxide. According to the report, there is little doubt from the technical viewpoint that such a project could be carried out. But up to now the Joule II research program has done little to chart the costs of injecting carbon dioxide into the seabed. It is clear that such a project would be very costly.

The researchers behind the report think it most realistic to send the carbon dioxide from coal-fired power stations down under the sea. These emissions are easier to collect than the emissions from cars, for example. Today the power stations are responsible for 40 percent of Europe's carbon dioxide emissions.

Separating the carbon dioxide gas from the other power station emissions would in itself increase the price of power by 50 to 60 percent. The long pipelines which would have to be built out into the North Sea are not included in this price.

Is this not an unrealistic futuristic dream, senior researcher Erik Lindeberg?

"Five or six years ago no one would have thought that this was realistic. But the EU is now giving serious consideration to introducing carbon dioxide levies. This could make such a project a possibility. And a price hike of the sort we are talking about is no worse than the one which occurred when the price of oil doubled in 1973," he said.

Lindeberg claimed that the oil fields in the North Sea could be refilled with carbon dioxide when they become empty. The Frigg field alone—which will soon be exhausted—could take 10 to 20 years of emissions from all of Britain's coal-fired power generating industry.

Carbon dioxide injection could also be used to increase oil production. Other studies which SINTEF IKU [expansion unknown] has made show that oil production

This report contains information which is or may be copyrighted in a number of countries. Therefore, copying and/or further dissemination of the report is expressly prohibited without obtaining the permission of the copyright owner(s).

in a given field would increase by 20 percent through the use of carbon dioxide instead of water as the injection medium.

The national association of the oil industry has already investigated the possibility of injecting carbon dioxide into the continental shelf from the platforms themselves. Technical department director Carsten Bowitz is skeptical toward the SINTEF report and the group of EU researchers.

"Transporting carbon dioxide all the way from the continent up to the North Sea is a new problem for us to look at. I do not know the details of the report. But a very large amount of energy would be needed to transport the gas out into the North Sea. In this way we would run the risk of producing more carbon dioxide than we would succeed in injecting into the continental shelf," he said.

UNITED KINGDOM

Environmental Concerns Over Nuclear Dump Told

94WN0346 London THE DAILY TELEGRAPH
in English 22 Jun 94 p 11

[Article by Christine McGourty: "Water Leak Raises Fears Over Nuclear Waste Dump Site"]

[Text] The choice of Sellafield as a site for a £3 billion underground nuclear waste dump came under question yesterday after evidence that water could leak to the surface.

The fear is that radioactive chemicals from the dump, half-a-mile underground, could rise to the surface with it, polluting surrounding land and water.

Prof John Knill, the chairman of the Radioactive Waste Management Advisory Committee (Rawmac), which advises the Government, said: "A few years ago we thought Sellafield would be a simple site. In fact, it is incredibly complicated."

The dump, due to come into operation in 2010 at the earliest, is the centrepiece of the Government's strategy for dealing with intermediate and low-level radioactive waste, which is currently stored where it is produced. Most of it is at Sellafield, which was chosen over Dounreay as a site for the dump in 1991.

But Prof Knill said recent geological studies showed "clear evidence that we have got water moving upward" from rocks known as the Borrowdale Volcanic Group, the planned site of the repository, through sandstone to the surface.

A computer model developed by Nirex, the nuclear waste agency responsible for building the dump, to

simulate the movement of groundwater showed no surface discharge. This was "clearly inconsistent" with the evidence from geological studies, Prof Knill said.

Leakage need not rule out Sellafield as site for the nuclear dump, but greater reliance would have to be placed on chemical and mechanical containment measures, he said.

"There are many questions that need to be answered. We will see a repository in Britain, but whether it will be at Sellafield is a different matter."

Nirex has spent £300 million studying the site and was expected to submit a planning application to Cumbria County Council for a £120 million underground laboratory. Mr Tom Curtin, a Nirex spokesman, said the application would be submitted in the next few weeks.

He said the computer model was only one of many used to study the site and that because it was only in the early stage of development, it was not expected to be 100 percent accurate.

Mr Curtin added that the amounts of water involved were tiny. The risk to the public would be within stringent safety requirements, a small fraction of that from natural background radiation.

Another four or five years of research were necessary before the safety of the site could be proven, he said. "It shows good promise.

"We are more confident than before. But if the hydrogeology turns out to be wrong we won't hesitate to walk away from the site."

In its report, Rawmac also said that an extra borehole might be needed in the Lake District—possibly in the valleys of either the River Bleng or Worm Gill—to study further the movements of water underground.

Nirex has already drilled more than 10 and a further borehole could increase costs and cause further delays. Mr Curtin said the agency believed another borehole was unnecessary.

Dr Patrick Green, a radioactive waste campaigner for Friends of the Earth, said the nuclear waste should be stored above ground where it could be monitored and retrieved if necessary.

But Prof Knill said deep storage was the best way to keep nuclear waste for many thousands of years since it could be tampered with if it was at the surface.

The Rawmac report provided some support for a study by Friends of the Earth, also published yesterday, which claimed there were flaws in the Nirex computer models. But while the environment group criticised the research by Nirex, Rawmac said it was "well-conducted, and of the highest quality."

Radioactivity Report on Water Near Nuclear Sites

BR2207145294 London Hermes Database
in English 21 July 94

[Press release issued by the UK Department of the Environment: "Radioactivity Report Shows Water Near Nuclear Sites Within Limits"]

[Text] The 1992 Radioactivity Monitoring Report, published by her Majesty's Inspectorate of Pollution (HMIP) today, shows that average individual radioactive exposures, from nuclear sites and other similar sites, not involving food consumption, during last year were substantially within UK Government and international limits.

The HMIP report, which combines several separate studies, has been sent to all local authorities in England and Wales and many other bodies.

It includes:

—the analysis of effluent samples from the 19 nuclear sites in England and Wales

—the checking of solid low level radioactive waste designed for disposal at the Drigg site operated by British Nuclear Fuels (BNFL)

—Environmental monitoring, around the nuclear sites, 27 landfill sites, 2 companies registered for the keeping and use of large quantities of tritium, and one smelting firm (closed the previous year) which had emitted some polonium-210.

The environmental monitoring looked particularly at water and associated sediments from ponds, lakes, streams, river banks and beaches in areas which may be used by the public for leisure activities. This complements independent monitoring on food sources carried out by the Ministry of Agriculture, Fisheries and Food, which is also made public annually.

The HMIP report concludes that in all cases radiation exposures which might have been incurred by the public from nonfood sources would have been substantially less than the limit of one milli-Sievert (1 mSv) per year which has been adopted by the UK Government based on the recommendations of the International Commission on Radiological Protection.

PRC, Germany Step Up Cooperation in Nuclear Waste Storage

AU0707185894 Duesseldorf HANDELSBLATT
in German 7 Jul 94 p 3

["er"-signed report: "Transfer of Safety Technology"]

[Text] Duesseldorf—The FRG and China also want to expand cooperation in the temporary and final storage of nuclear waste. This is envisaged by a declaration of intent. The document is to be signed next week, that is, immediately following Li Peng's departure.

In very general terms, it will involve—the contacts have been approved by the appropriate agency, the Federal Economics Ministry—the export of German safety technology and the establishment of a discussion circle on conditioning technology [Konditionierungstechnologien]. According to the German Nuclear Forum in Bonn, Beijing is particularly interested in containers for spent fuel rods from Chinese nuclear reactors. The Chinese have directly approached the world's leading producer of such containers, the Essen-based Nuclear Container Company (GNB), which wants to kill two birds with one stone with this "long-term, but initially vague cooperation." On the one hand, the company wants to open doors to Chinese and Asian markets before the United States and on the other hand, the Essen specialists are looking for a partner in China for the production of special containers, which weigh about 100 tonnes and cost about 1 million German marks. The reason for that is that the transportation of special containers is extremely costly. However, they would also like a location in China that could be used to serve the Eastern European market also. GNB Managing Director Dieter Schoenfeldt does not expect "concrete agreements" before the end of the century.

Schoenfeldt says that speculation about German operators of nuclear reactors shortly having German nuclear waste reprocessed in China, in, for example, the Gobi Desert, is "unlikely and highly speculative." German power companies have invested billions in the national disposal of radioactive materials and are hardly likely to conclude additional agreements with the great Asian nuclear power.

In addition, Chinese nuclear experts are familiar with the German conditioning technology at the Asse pilot plant and Gorleben final storage center. Standards at Chinese nuclear facilities, especially military ones, is something that is largely unknown in Germany. However, the Vienna-based IAEA should have an overview of the situation at civilian facilities that is at least partially satisfactory.

Chinese Nuclear Test Affects Radiation in Central Asia

LD0707091194 Moscow ITAR-TASS in English
0810 GMT 7 Jul 94

[By ITAR-TASS correspondent Boris Mainayev]

[Text] Bishkek July 7 TASS—Experts of an international geophysical expedition have qualified a nuclear test carried out by China on June 10 as an underground nuclear explosion with partial discharge. An account made by the expedition was published by the VECHEK BISHKEK newspaper on Thursday. The consequences of the explosion were studied by scientists from Russia, Kazakhstan and Kyrgyzstan.

The timing of the explosion was favourable for China, the expedition said. A steady wind blowing over the nuclear test site protected the Chinese territory and carried discharged particles from the east to the west, spreading them all over Central Asian Republics.

A mist of small discharged particles was reported in the Naryn region, in the east of Issyk-Kul and the east Alma-Ata [Almaty] region of Kazakhstan. The radiation level along a highway up in the mountains, connecting China and Kyrgyzstan, was reported to have increased by 40 per cent, reaching 5 micro roentgen an hour. A 15 per cent increase in the radiation level was reported in the Chuisk valley, which is considered to be one of the most picturesque places in Kazakhstan.

Experts declared that the radiation level increased in proportion to the altitude, which means that the majority of charged particles reached the stratosphere and spread all over the globe. In Bishkek, the content of strontium in the air had increased twice at the time following the explosion. All this shows that the "ecologically clean" underground explosion on the Lob-Nor test site has affected everyone on our planet.

G-7 Communique Analyzed

BR1407085294 London REUTER Textline Database
in English 13 July 94

[Unattributed article from Brussels EUROPE: "Summiters Discuss Plans to Reduce Unemployment, Close Chernobyl and Cooperate on Crime"]

[Excerpts] The 20th Summit of the Group of Seven ended in Naples on 10 July with the reading of a declaration from the presidency on the political subjects discussed by the Heads of State and Government of the United States, Canada, Japan (Prime Minister Murayama was represented by his deputy following an unease Friday evening), Italy (which chaired the meeting), Germany, France and the United Kingdom, as well as the president of the European Commission, Jacques Delors, and in the presence of Boris Yeltsin. [passage omitted]

Ukraine: Battle on Figures

The discussion between the heads of state and government on the contribution to nuclear safety in Ukraine livened up considerably as soon as it was a question of deciding upon the amounts needed, while all participants were in agreement on the need to substantially help Ukraine given its current difficulties and the role it may be called upon to play. In a first stage, therefore, the total of commitments promised was only \$100 million and Chancellor Kohl's insistence was needed (for this figure to be at least doubled) and also that of President Mitterrand (who felt it should be tripled) for the sum of \$200 million to be reached. John Major was apparently one of the most reticent leaders to want to commit himself.

Developing Countries: Debt and Environment

The discussion of the leaders on the situation in developing countries was mainly geared to two themes: the debt, and the follow-up to the Rio Earth Summit (the

debate on the first theme—the environment—obviously also bore on the aspects which concern industrialized countries). Regarding the follow-up to the Rio Summit, Chancellor Kohl felt that the situation was "rather sad" and that more funding should be devoted to the initiatives launched by the summit. He was able to note the major effort put in by Germany in particular concerning the protection of tropical forests in Brazil and elsewhere: \$175 million, that is, 60.5 percent of the total. After Germany comes the United Kingdom with 11.3 percent of the total, the United States with 7.8 percent, Japan with 7.3 percent, Canada with 2.9 percent, and the Netherlands with 1.8 percent (despite their small size). As far as the problem of the debt is concerned, John Major insisted on the need to continue effort begun in 1990 in Trinidad, where it had been decided to reduce by two thirds the debt of the poorest countries (whereas, up until then, it had only seemed possible to reduce the indebtedness of some countries by 50 percent, and to cancel debts for \$3 billion in total.) [passage omitted]

This is a U.S. Government publication. Its contents in no way represent the policies, views, or attitudes of the U.S. Government. Users of this publication may cite FBIS or JPRS provided they do so in a manner clearly identifying them as the secondary source.

Foreign Broadcast Information Service (FBIS) and Joint Publications Research Service (JPRS) publications contain political, military, economic, environmental, and sociological news, commentary, and other information, as well as scientific and technical data and reports. All information has been obtained from foreign radio and television broadcasts, news agency transmissions, newspapers, books, and periodicals. Items generally are processed from the first or best available sources. It should not be inferred that they have been disseminated only in the medium, in the language, or to the area indicated. Items from foreign language sources are translated; those from English-language sources are transcribed. Except for excluding certain diacritics, FBIS renders personal names and place-names in accordance with the romanization systems approved for U.S. Government publications by the U.S. Board of Geographic Names.

Headlines, editorial reports, and material enclosed in brackets [] are supplied by FBIS/JPRS. Processing indicators such as [Text] or [Excerpts] in the first line of each item indicate how the information was processed from the original. Unfamiliar names rendered phonetically are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear from the original source but have been supplied as appropriate to the context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by the source. Passages in boldface or italics are as published.

SUBSCRIPTION/PROCUREMENT INFORMATION

The FBIS DAILY REPORT contains current news and information and is published Monday through Friday in eight volumes: China, East Europe, Central Eurasia, East Asia, Near East & South Asia, Sub-Saharan Africa, Latin America, and West Europe. Supplements to the DAILY REPORTs may also be available periodically and will be distributed to regular DAILY REPORT subscribers. JPRS publications, which include approximately 50 regional, worldwide, and topical reports, generally contain less time-sensitive information and are published periodically.

Current DAILY REPORTs and JPRS publications are listed in *Government Reports Announcements* issued semimonthly by the National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, Virginia 22161 and the *Monthly Catalog of U.S. Government Publications* issued by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

The public may subscribe to either hardcover or microfiche versions of the DAILY REPORTs and JPRS publications through NTIS at the above address or by calling (703) 487-4630. Subscription rates will be

provided by NTIS upon request. Subscriptions are available outside the United States from NTIS or appointed foreign dealers. New subscribers should expect a 30-day delay in receipt of the first issue.

U.S. Government offices may obtain subscriptions to the DAILY REPORTs or JPRS publications (hardcover or microfiche) at no charge through their sponsoring organizations. For additional information or assistance, call FBIS, (202) 338-6735, or write to P.O. Box 2604, Washington, D.C. 20013. Department of Defense consumers are required to submit requests through appropriate command validation channels to DIA, RTS-2C, Washington, D.C. 20301. (Telephone: (202) 373-3771, Autovon: 243-3771.)

Back issues or single copies of the DAILY REPORTs and JPRS publications are not available. Both the DAILY REPORTs and the JPRS publications are on file for public reference at the Library of Congress and at many Federal Depository Libraries. Reference copies may also be seen at many public and university libraries throughout the United States.

END OF

FICHE

DATE FILMED

18 AUG 94